Appendix A
LEED Checklist

LEED 2009 for New Construction and Major Renovations

Project Checklist

Project Name

Date

Sustainable Sites — Possible Points: 26

Y	N	?			
Y			Prereq 1	Construction Activity Pollution Prevention	
			Credit 1	Site Selection	1
			Credit 2	Development Density and Community Connectivity	5
			Credit 3	Brownfield Redevelopment	1
			Credit 4.1	Alternative Transportation—Public Transportation Access	6
			Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms	1
			Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	3
			Credit 4.4	Alternative Transportation—Parking Capacity	2
			Credit 5.1	Site Development—Protect or Restore Habitat	1
			Credit 5.2	Site Development—Maximize Open Space	1
			Credit 6.1	Stormwater Design—Quantity Control	1
			Credit 6.2	Stormwater Design—Quality Control	1
			Credit 7.1	Heat Island Effect—Non-roof	1
			Credit 7.2	Heat Island Effect—Roof	1
			Credit 8	Light Pollution Reduction	1

Water Efficiency — Possible Points: 10

Y			Prereq 1	Water Use Reduction—20% Reduction	
			Credit 1	Water Efficient Landscaping	2 to 4
			Credit 2	Innovative Wastewater Technologies	2
			Credit 3	Water Use Reduction	2 to 4

Energy and Atmosphere — Possible Points: 35

Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	
Y			Prereq 2	Minimum Energy Performance	
Y			Prereq 3	Fundamental Refrigerant Management	
			Credit 1	Optimize Energy Performance	1 to 19
			Credit 2	On-Site Renewable Energy	1 to 7
			Credit 3	Enhanced Commissioning	2
			Credit 4	Enhanced Refrigerant Management	2
			Credit 5	Measurement and Verification	3
			Credit 6	Green Power	2

Materials and Resources — Possible Points: 14

Y			Prereq 1	Storage and Collection of Recyclables	
			Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof	1 to 3
			Credit 1.2	Building Reuse—Maintain 50% of Interior Non-Structural Elements	1
			Credit 2	Construction Waste Management	1 to 2
			Credit 3	Materials Reuse	1 to 2

Materials and Resources, Continued

Y	N	?			
			Credit 4	Recycled Content	1 to 2
			Credit 5	Regional Materials	1 to 2
			Credit 6	Rapidly Renewable Materials	1
			Credit 7	Certified Wood	1

Indoor Environmental Quality — Possible Points: 15

Y			Prereq 1	Minimum Indoor Air Quality Performance	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
			Credit 1	Outdoor Air Delivery Monitoring	1
			Credit 2	Increased Ventilation	1
			Credit 3.1	Construction IAQ Management Plan—During Construction	1
			Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
			Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
			Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
			Credit 4.3	Low-Emitting Materials—Flooring Systems	1
			Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
			Credit 5	Indoor Chemical and Pollutant Source Control	1
			Credit 6.1	Controllability of Systems—Lighting	1
			Credit 6.2	Controllability of Systems—Thermal Comfort	1
			Credit 7.1	Thermal Comfort—Design	1
			Credit 7.2	Thermal Comfort—Verification	1
			Credit 8.1	Daylight and Views—Daylight	1
			Credit 8.2	Daylight and Views—Views	1

Innovation and Design Process — Possible Points: 6

			Credit 1.1	Innovation in Design: Specific Title	1
			Credit 1.2	Innovation in Design: Specific Title	1
			Credit 1.3	Innovation in Design: Specific Title	1
			Credit 1.4	Innovation in Design: Specific Title	1
			Credit 1.5	Innovation in Design: Specific Title	1
			Credit 2	LEED Accredited Professional	1

Regional Priority Credits — Possible Points: 4

			Credit 1.1	Regional Priority: Specific Credit	1
			Credit 1.2	Regional Priority: Specific Credit	1
			Credit 1.3	Regional Priority: Specific Credit	1
			Credit 1.4	Regional Priority: Specific Credit	1

Total — Possible Points: 110

Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110

Appendix B
Air Quality Data

Parenthetical URBEMIS2007 (Version 9.2.4) Assumptions
For: Lakeport Courthouse
Date: July 2010

LAND USES

Amount	Land Use Type	Unit Type	Trip Rate
50	Government office building	1,000 square feet	8.06

CONSTRUCTION SOURCES

Year	Duration (months)	Development
2012	8 months	Grading, Trenching, Paving, Building
2013	12 months	Building, Coating
2014	1 month	Building, Coating

Phase 1 - Grading:

Year	Total Acreage Disturbed	Acreage Disturbed Daily	Duration-(days)	Fugitive Dust	Soil Hauling (cubic yards)	Estimated Cut/Fill (cubic yards)
2012	5.74	2	20	Default		

Grading Equipment (URBEMIS2007 Default):

Quantity	Type	Hours of Daily Operation
1	Grader	6
1	Rubber Tired Dozer	6
1	Tractor/Loaders/Backhoe	7
1	Water Trucks	8

Phase 2 - Trenching:

Year	Duration
2012	10 days

Trenching Equipment (URBEMIS2007 Default):

Quantity	Type	Hours of Daily Operation
2	Excavators	8
1	Other General Industrial Equipment	8

Phase 3 - Paving:

Year	Duration (days)	Acres
2012	10	5.74

Equipment (URBEMIS2007 Default):

Quantity	Type	Hours of Daily Operation
4	Cement and Mortar Mixers	6
1	Paver	7
2	Paving Equipment	6
1	Roller	7

Phase 4 – Building Construction

Duration:

20 months

Equipment (URBEMIS2007 Default):

Quantity	Type	Hours of Daily Operation
1	Crane	4
2	Forklifts	6
1	Tractor/Loader/Backhoe	8

Phase 5 – Architectural Coatings:

Duration – 1.5Months
Low VOC coatings (Pursuant to SCAQMD Rule 1113)
(URBEMIS2007 default all phases)

Sub- Phase 5 - Worker Commute

(URBEMIS2007 default all phases)

Construction Mitigation:

Refer to URBEMIS2007 file output.

YEAR 2013 AREA SOURCES

Natural Gas Fuel Combustion:

(URBEMIS2007 default all phases)

Hearth Fuel Combustion:

Off

Landscape Fuel Combustion:

Year of Completion	Summer Days
2013	180

Consumer Products:

(URBEMIS2007 default all phases)

Architectural Coating:

(URBEMIS2007 default all phases)

Area Source Mitigation:

Low VOC coatings (Pursuant to SCAQMD Rule 1113)
Refer to URBEMIS2007 file output.

YEAR 2013 OPERATIONAL SOURCES

Vehicle Fleet %:

(URBEMIS2007 default all phases)

Year:

Year of Completion – 2013

Trip Characteristics:

(URBEMIS2007 Default all phases)

Temperature Data:

40 to 90 degrees Fahrenheit

Variable Starts:

(URBEMIS2007 default all phases)

Road Dust:

Paved – 100%
Unpaved – 0%

Pass By Trips (On/Off):

Off

Double-Counting(On/Off):

Off

Operational Mitigation Measures:

Refer to URBEMIS2007 file output.

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: I:\pdata\00000100\10P\WPWIN\EddieT\Programs\Air\URBEMIS\URBEMIS2007\Lakeport Courthouse.urb924

Project Name: Lakeport Courthouse

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (tons/year unmitigated)	0.14	0.97	0.77	0.00	0.46	0.06	0.52	0.10	0.05	0.15	132.04
2012 TOTALS (tons/year mitigated)	0.14	0.97	0.77	0.00	0.19	0.06	0.25	0.04	0.05	0.09	132.04
Percent Reduction	0.00	0.00	0.00	0.00	58.97	0.00	52.57	58.83	0.00	38.35	0.00
2013 TOTALS (tons/year unmitigated)	0.32	1.01	0.99	0.00	0.00	0.06	0.06	0.00	0.05	0.05	170.04
2013 TOTALS (tons/year mitigated)	0.20	1.01	0.99	0.00	0.00	0.06	0.06	0.00	0.05	0.05	170.04
Percent Reduction	37.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2014 TOTALS (tons/year unmitigated)	0.35	0.08	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.38
2014 TOTALS (tons/year mitigated)	0.21	0.08	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.38
Percent Reduction	41.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.06	0.06	0.19	0.00	0.00	0.00	73.25

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.50	0.73	5.79	0.01	0.96	0.19	532.80

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.56	0.79	5.98	0.01	0.96	0.19	606.05

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

2012	0.14	0.97	0.77	0.00	0.46	0.06	0.52	0.10	0.05	0.15	132.04
Mass Grading 05/01/2012-05/31/2012	0.03	0.25	0.14	0.00	0.46	0.01	0.47	0.10	0.01	0.11	27.02
Mass Grading Dust	0.00	0.00	0.00	0.00	0.46	0.00	0.46	0.10	0.00	0.10	0.00
Mass Grading Off Road Diesel	0.03	0.25	0.13	0.00	0.00	0.01	0.01	0.00	0.01	0.01	25.84
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18
Trenching 06/01/2012-06/15/2012	0.01	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.99
Trenching Off Road Diesel	0.01	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.43
Trenching Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
Asphalt 06/16/2012-06/30/2012	0.02	0.09	0.06	0.00	0.00	0.01	0.01	0.00	0.01	0.01	9.80
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.01	0.07	0.04	0.00	0.00	0.01	0.01	0.00	0.01	0.01	5.66
Paving On Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.11
Paving Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.02
Building 07/01/2012-01/31/2014	0.08	0.55	0.52	0.00	0.00	0.03	0.03	0.00	0.03	0.03	85.23
Building Off Road Diesel	0.07	0.52	0.30	0.00	0.00	0.03	0.03	0.00	0.03	0.03	58.52
Building Vendor Trips	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.29
Building Worker Trips	0.01	0.01	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.43

2013	0.32	1.01	0.99	0.00	0.00	0.06	0.06	0.00	0.05	0.05	170.04
Building 07/01/2012-01/31/2014	0.14	1.01	0.99	0.00	0.00	0.06	0.06	0.00	0.05	0.05	169.83
Building Off Road Diesel	0.12	0.95	0.58	0.00	0.00	0.06	0.06	0.00	0.05	0.05	116.59
Building Vendor Trips	0.00	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.54
Building Worker Trips	0.01	0.02	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	42.70
Coating 12/15/2013-01/31/2014	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
Architectural Coating	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
2014	0.35	0.08	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.38
Building 07/01/2012-01/31/2014	0.01	0.08	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.97
Building Off Road Diesel	0.01	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.27
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93
Building Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.76
Coating 12/15/2013-01/31/2014	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
Architectural Coating	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41

Phase Assumptions

Phase: Mass Grading 5/1/2012 - 5/31/2012 - Default Mass Site Grading Description

Total Acres Disturbed: 5.74

Maximum Daily Acreage Disturbed: 2

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 6/1/2012 - 6/15/2012 - Default Trenching Description

Off-Road Equipment:

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 6/16/2012 - 6/30/2012 - Default Paving Description

Acres to be Paved: 5.74

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

Phase: Building Construction 7/1/2012 - 1/31/2014 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 12/15/2013 - 1/31/2014 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

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Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012	0.14	0.97	0.77	0.00	0.19	0.06	0.25	0.04	0.05	0.09	132.04
Mass Grading 05/01/2012-05/31/2012	0.03	0.25	0.14	0.00	0.19	0.01	0.20	0.04	0.01	0.05	27.02
Mass Grading Dust	0.00	0.00	0.00	0.00	0.19	0.00	0.19	0.04	0.00	0.04	0.00
Mass Grading Off Road Diesel	0.03	0.25	0.13	0.00	0.00	0.01	0.01	0.00	0.01	0.01	25.84
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18
Trenching 06/01/2012-06/15/2012	0.01	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.99
Trenching Off Road Diesel	0.01	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.43
Trenching Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
Asphalt 06/16/2012-06/30/2012	0.02	0.09	0.06	0.00	0.00	0.01	0.01	0.00	0.01	0.01	9.80
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.01	0.07	0.04	0.00	0.00	0.01	0.01	0.00	0.01	0.01	5.66
Paving On Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.11
Paving Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.02
Building 07/01/2012-01/31/2014	0.08	0.55	0.52	0.00	0.00	0.03	0.03	0.00	0.03	0.03	85.23
Building Off Road Diesel	0.07	0.52	0.30	0.00	0.00	0.03	0.03	0.00	0.03	0.03	58.52
Building Vendor Trips	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.29
Building Worker Trips	0.01	0.01	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.43

2013	0.20	1.01	0.99	0.00	0.00	0.06	0.06	0.00	0.05	0.05	170.04
Building 07/01/2012-01/31/2014	0.14	1.01	0.99	0.00	0.00	0.06	0.06	0.00	0.05	0.05	169.83
Building Off Road Diesel	0.12	0.95	0.58	0.00	0.00	0.06	0.06	0.00	0.05	0.05	116.59
Building Vendor Trips	0.00	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.54
Building Worker Trips	0.01	0.02	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	42.70
Coating 12/15/2013-01/31/2014	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
Architectural Coating	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
2014	0.21	0.08	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.38
Building 07/01/2012-01/31/2014	0.01	0.08	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.97
Building Off Road Diesel	0.01	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.27
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93
Building Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.76
Coating 12/15/2013-01/31/2014	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
Architectural Coating	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 5/1/2012 - 5/31/2012 - Default Mass Site Grading Description

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

The following mitigation measures apply to Phase: Architectural Coating 12/15/2013 - 1/31/2014 - Default Architectural Coating Description

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For Residential Architectural Coating Measures, the Residential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Residential Architectural Coating Measures, the Residential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.06	0.05	0.00	0.00	0.00	73.00
Hearth							
Landscape	0.01	0.00	0.14	0.00	0.00	0.00	0.25
Consumer Products	0.00						
Architectural Coatings	0.05						
TOTALS (tons/year, unmitigated)	0.06	0.06	0.19	0.00	0.00	0.00	73.25

Area Source Changes to Defaults

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Goverment office building	0.50	0.73	5.79	0.01	0.96	0.19	532.80
TOTALS (tons/year, unmitigated)	0.50	0.73	5.79	0.01	0.96	0.19	532.80

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Goverment office building		8.06	1000 sq ft	50.00	403.00	3,048.70
					403.00	3,048.70

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	48.6	0.8	99.0	0.2
Light Truck < 3750 lbs	10.9	1.8	93.6	4.6
Light Truck 3751-5750 lbs	21.8	0.5	99.5	0.0
Med Truck 5751-8500 lbs	9.6	1.0	99.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	76.5	23.5
Lite-Heavy Truck 10,001-14,000 lbs	0.7	0.0	42.9	57.1

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.5	60.0	40.0	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Goverment office building				10.0	5.0	85.0

Operational Changes to Defaults

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: I:\pdata\00000100\10P\WPWIN\EddieT\Programs\Air\URBEMIS\URBEMIS2007\Lakeport Courthouse.urb924

Project Name: Lakeport Courthouse

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

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Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (lbs/day unmitigated)	3.91	22.00	12.46	0.01	40.00	1.31	41.08	8.36	1.20	9.34	2,349.54
2012 TOTALS (lbs/day mitigated)	3.91	22.00	12.46	0.01	16.34	1.31	17.42	3.41	1.20	4.40	2,349.54
2013 TOTALS (lbs/day unmitigated)	30.83	7.75	7.86	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,336.86
2013 TOTALS (lbs/day mitigated)	10.74	7.75	7.86	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,336.86
2014 TOTALS (lbs/day unmitigated)	30.75	7.11	7.52	0.00	0.02	0.39	0.41	0.01	0.36	0.36	1,336.98
2014 TOTALS (lbs/day mitigated)	18.10	7.11	7.52	0.00	0.02	0.39	0.41	0.01	0.36	0.36	1,336.98

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.43	0.35	1.83	0.00	0.01	0.01	402.81

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	2.72	3.45	30.72	0.03	5.26	1.02	3,053.05

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	3.15	3.80	32.55	0.03	5.27	1.03	3,455.86

Construction Unmitigated Detail Report:

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CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 5/1/2012-5/31/2012 Active Days: 23	2.72	**22.00**	**12.46**	0.00	**40.00**	1.07	**41.08**	**8.36**	0.99	**9.34**	**2,349.54**
Mass Grading 05/01/2012-05/31/2012	2.72	22.00	12.46	0.00	40.00	1.07	41.08	8.36	0.99	9.34	2,349.54
Mass Grading Dust	0.00	0.00	0.00	0.00	40.00	0.00	40.00	8.35	0.00	8.35	0.00
Mass Grading Off Road Diesel	2.69	21.95	11.51	0.00	0.00	1.07	1.07	0.00	0.99	0.99	2,247.32
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.03	0.05	0.94	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.23
Time Slice 6/1/2012-6/15/2012 Active Days: 11	1.83	15.29	8.95	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.86
Trenching 06/01/2012-06/15/2012	1.83	15.29	8.95	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.86
Trenching Off Road Diesel	1.80	15.24	8.01	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,714.64
Trenching Worker Trips	0.03	0.05	0.94	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.23
Time Slice 6/18/2012-6/29/2012 Active Days: 10	3.91	17.20	11.24	**0.01**	0.03	**1.31**	1.34	0.01	**1.20**	1.21	1,959.16
Asphalt 06/16/2012-06/30/2012	3.91	17.20	11.24	0.01	0.03	1.31	1.34	0.01	1.20	1.21	1,959.16
Paving Off-Gas	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.23	13.48	8.10	0.00	0.00	1.17	1.17	0.00	1.07	1.07	1,131.92
Paving On Road Diesel	0.25	3.62	1.25	0.01	0.02	0.14	0.16	0.01	0.12	0.13	622.80
Paving Worker Trips	0.06	0.10	1.89	0.00	0.01	0.01	0.02	0.00	0.00	0.01	204.45

Time Slice 7/2/2012-12/31/2012 Active Days: 131	1.16	8.37	7.89	0.00	0.02	0.51	0.53	0.01	0.47	0.47	1,301.24
Building 07/01/2012-01/31/2014	1.16	8.37	7.89	0.00	0.02	0.51	0.53	0.01	0.47	0.47	1,301.24
Building Off Road Diesel	1.03	7.87	4.56	0.00	0.00	0.49	0.49	0.00	0.45	0.45	893.39
Building Vendor Trips	0.03	0.34	0.30	0.00	0.00	0.01	0.02	0.00	0.01	0.01	80.73
Building Worker Trips	0.09	0.16	3.02	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.12
Time Slice 1/1/2013-12/13/2013 Active Days: 249	1.06	7.73	7.56	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,301.35
Building 07/01/2012-01/31/2014	1.06	7.73	7.56	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,301.35
Building Off Road Diesel	0.95	7.29	4.48	0.00	0.00	0.43	0.43	0.00	0.39	0.39	893.39
Building Vendor Trips	0.03	0.30	0.28	0.00	0.00	0.01	0.01	0.00	0.01	0.01	80.74
Building Worker Trips	0.09	0.15	2.79	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.23
Time Slice 12/16/2013-12/31/2013 Active Days: 12	**30.83**	7.75	7.86	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,336.86
Building 07/01/2012-01/31/2014	1.06	7.73	7.56	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,301.35
Building Off Road Diesel	0.95	7.29	4.48	0.00	0.00	0.43	0.43	0.00	0.39	0.39	893.39
Building Vendor Trips	0.03	0.30	0.28	0.00	0.00	0.01	0.01	0.00	0.01	0.01	80.74
Building Worker Trips	0.09	0.15	2.79	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.23
Coating 12/15/2013-01/31/2014	29.76	0.02	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.51
Architectural Coating	29.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.02	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.51

Time Slice 1/1/2014-1/31/2014 Active Days: 23	30.75	7.11	7.52	0.00	0.02	0.39	0.41	0.01	0.36	0.36	1,336.98
Building 07/01/2012-01/31/2014	0.99	7.09	7.24	0.00	0.02	0.39	0.41	0.01	0.36	0.36	1,301.46
Building Off Road Diesel	0.88	6.70	4.39	0.00	0.00	0.37	0.37	0.00	0.34	0.34	893.39
Building Vendor Trips	0.02	0.26	0.26	0.00	0.00	0.01	0.01	0.00	0.01	0.01	80.74
Building Worker Trips	0.08	0.13	2.59	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.33
Coating 12/15/2013-01/31/2014	29.76	0.01	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.52
Architectural Coating	29.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.01	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.52

Phase Assumptions

Phase: Mass Grading 5/1/2012 - 5/31/2012 - Default Mass Site Grading Description

Total Acres Disturbed: 5.74

Maximum Daily Acreage Disturbed: 2

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 6/1/2012 - 6/15/2012 - Default Trenching Description

Off-Road Equipment:

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 6/16/2012 - 6/30/2012 - Default Paving Description

Acres to be Paved: 5.74

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

Phase: Building Construction 7/1/2012 - 1/31/2014 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 12/15/2013 - 1/31/2014 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

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Time Slice 5/1/2012-5/31/2012 Active Days: 23	2.72	**22.00**	**12.46**	0.00	16.34	1.07	17.42	3.41	0.99	4.40	**2,349.54**
Mass Grading 05/01/2012-05/31/2012	2.72	22.00	12.46	0.00	16.34	1.07	17.42	3.41	0.99	4.40	2,349.54
Mass Grading Dust	0.00	0.00	0.00	0.00	16.34	0.00	16.34	3.41	0.00	3.41	0.00
Mass Grading Off Road Diesel	2.69	21.95	11.51	0.00	0.00	1.07	1.07	0.00	0.99	0.99	2,247.32
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.03	0.05	0.94	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.23
Time Slice 6/1/2012-6/15/2012 Active Days: 11	1.83	15.29	8.95	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.86
Trenching 06/01/2012-06/15/2012	1.83	15.29	8.95	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.86
Trenching Off Road Diesel	1.80	15.24	8.01	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,714.64
Trenching Worker Trips	0.03	0.05	0.94	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.23
Time Slice 6/18/2012-6/29/2012 Active Days: 10	3.91	17.20	11.24	**0.01**	0.03	**1.31**	1.34	0.01	**1.20**	1.21	1,959.16
Asphalt 06/16/2012-06/30/2012	3.91	17.20	11.24	0.01	0.03	1.31	1.34	0.01	1.20	1.21	1,959.16
Paving Off-Gas	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.23	13.48	8.10	0.00	0.00	1.17	1.17	0.00	1.07	1.07	1,131.92
Paving On Road Diesel	0.25	3.62	1.25	0.01	0.02	0.14	0.16	0.01	0.12	0.13	622.80
Paving Worker Trips	0.06	0.10	1.89	0.00	0.01	0.01	0.02	0.00	0.00	0.01	204.45
Time Slice 7/2/2012-12/31/2012 Active Days: 131	1.16	8.37	7.89	0.00	0.02	0.51	0.53	0.01	0.47	0.47	1,301.24
Building 07/01/2012-01/31/2014	1.16	8.37	7.89	0.00	0.02	0.51	0.53	0.01	0.47	0.47	1,301.24
Building Off Road Diesel	1.03	7.87	4.56	0.00	0.00	0.49	0.49	0.00	0.45	0.45	893.39
Building Vendor Trips	0.03	0.34	0.30	0.00	0.00	0.01	0.02	0.00	0.01	0.01	80.73
Building Worker Trips	0.09	0.16	3.02	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.12

Time Slice 1/1/2013-12/13/2013 Active Days: 249	1.06	7.73	7.56	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,301.35
Building 07/01/2012-01/31/2014	1.06	7.73	7.56	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,301.35
Building Off Road Diesel	0.95	7.29	4.48	0.00	0.00	0.43	0.43	0.00	0.39	0.39	893.39
Building Vendor Trips	0.03	0.30	0.28	0.00	0.00	0.01	0.01	0.00	0.01	0.01	80.74
Building Worker Trips	0.09	0.15	2.79	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.23
Time Slice 12/16/2013-12/31/2013 Active Days: 12	10.74	7.75	7.86	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,336.86
Building 07/01/2012-01/31/2014	1.06	7.73	7.56	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,301.35
Building Off Road Diesel	0.95	7.29	4.48	0.00	0.00	0.43	0.43	0.00	0.39	0.39	893.39
Building Vendor Trips	0.03	0.30	0.28	0.00	0.00	0.01	0.01	0.00	0.01	0.01	80.74
Building Worker Trips	0.09	0.15	2.79	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.23
Coating 12/15/2013-01/31/2014	9.68	0.02	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.51
Architectural Coating	9.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.02	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.51
Time Slice 1/1/2014-1/31/2014 Active Days: 23	18.10	7.11	7.52	0.00	0.02	0.39	0.41	0.01	0.36	0.36	1,336.98
Building 07/01/2012-01/31/2014	0.99	7.09	7.24	0.00	0.02	0.39	0.41	0.01	0.36	0.36	1,301.46
Building Off Road Diesel	0.88	6.70	4.39	0.00	0.00	0.37	0.37	0.00	0.34	0.34	893.39
Building Vendor Trips	0.02	0.26	0.26	0.00	0.00	0.01	0.01	0.00	0.01	0.01	80.74
Building Worker Trips	0.08	0.13	2.59	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.33
Coating 12/15/2013-01/31/2014	17.12	0.01	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.52
Architectural Coating	17.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.01	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.52

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Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 5/1/2012 - 5/31/2012 - Default Mass Site Grading Description

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

The following mitigation measures apply to Phase: Architectural Coating 12/15/2013 - 1/31/2014 - Default Architectural Coating Description

For Residential Architectural Coating Measures, the Residential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Residential Architectural Coating Measures, the Residential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.02	0.33	0.28	0.00	0.00	0.00	400.00
Hearth							
Landscape	0.12	0.02	1.55	0.00	0.01	0.01	2.81
Consumer Products	0.00						
Architectural Coatings	0.29						
TOTALS (lbs/day, unmitigated)	0.43	0.35	1.83	0.00	0.01	0.01	402.81

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Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Goverment office building	2.72	3.45	30.72	0.03	5.26	1.02	3,053.05
TOTALS (lbs/day, unmitigated)	2.72	3.45	30.72	0.03	5.26	1.02	3,053.05

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Temperature (F): 85 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Goverment office building		8.06	1000 sq ft	50.00	403.00	3,048.70
					403.00	3,048.70

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	48.6	0.8	99.0	0.2
Light Truck < 3750 lbs	10.9	1.8	93.6	4.6
Light Truck 3751-5750 lbs	21.8	0.5	99.5	0.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med Truck 5751-8500 lbs	9.6	1.0	99.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	76.5	23.5
Lite-Heavy Truck 10,001-14,000 lbs	0.7	0.0	42.9	57.1
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.5	60.0	40.0	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Goverment office building				10.0	5.0	85.0

Operational Changes to Defaults

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Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: I:\pdata\00000100\10P\WPWIN\EddieT\Programs\Air\URBEMIS\URBEMIS2007\Lakeport Courthouse.urb924

Project Name: Lakeport Courthouse

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

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Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (lbs/day unmitigated)	3.91	22.00	12.46	0.01	40.00	1.31	41.08	8.36	1.20	9.34	2,349.54
2012 TOTALS (lbs/day mitigated)	3.91	22.00	12.46	0.01	16.34	1.31	17.42	3.41	1.20	4.40	2,349.54
2013 TOTALS (lbs/day unmitigated)	30.83	7.75	7.86	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,336.86
2013 TOTALS (lbs/day mitigated)	10.74	7.75	7.86	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,336.86
2014 TOTALS (lbs/day unmitigated)	30.75	7.11	7.52	0.00	0.02	0.39	0.41	0.01	0.36	0.36	1,336.98
2014 TOTALS (lbs/day mitigated)	18.10	7.11	7.52	0.00	0.02	0.39	0.41	0.01	0.36	0.36	1,336.98

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.31	0.33	0.28	0.00	0.00	0.00	400.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	2.84	5.02	33.74	0.03	5.26	1.02	2,652.20

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	3.15	5.35	34.02	0.03	5.26	1.02	3,052.20

Construction Unmitigated Detail Report:

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CONSTRUCTION EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 5/1/2012-5/31/2012 Active Days: 23	2.72	**22.00**	**12.46**	0.00	**40.00**	1.07	**41.08**	**8.36**	0.99	**9.34**	**2,349.54**
Mass Grading 05/01/2012-05/31/2012	2.72	22.00	12.46	0.00	40.00	1.07	41.08	8.36	0.99	9.34	2,349.54
Mass Grading Dust	0.00	0.00	0.00	0.00	40.00	0.00	40.00	8.35	0.00	8.35	0.00
Mass Grading Off Road Diesel	2.69	21.95	11.51	0.00	0.00	1.07	1.07	0.00	0.99	0.99	2,247.32
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.03	0.05	0.94	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.23
Time Slice 6/1/2012-6/15/2012 Active Days: 11	1.83	15.29	8.95	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.86
Trenching 06/01/2012-06/15/2012	1.83	15.29	8.95	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.86
Trenching Off Road Diesel	1.80	15.24	8.01	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,714.64
Trenching Worker Trips	0.03	0.05	0.94	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.23
Time Slice 6/18/2012-6/29/2012 Active Days: 10	3.91	17.20	11.24	**0.01**	0.03	**1.31**	1.34	0.01	**1.20**	1.21	1,959.16
Asphalt 06/16/2012-06/30/2012	3.91	17.20	11.24	0.01	0.03	1.31	1.34	0.01	1.20	1.21	1,959.16
Paving Off-Gas	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.23	13.48	8.10	0.00	0.00	1.17	1.17	0.00	1.07	1.07	1,131.92
Paving On Road Diesel	0.25	3.62	1.25	0.01	0.02	0.14	0.16	0.01	0.12	0.13	622.80
Paving Worker Trips	0.06	0.10	1.89	0.00	0.01	0.01	0.02	0.00	0.00	0.01	204.45

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Time Slice 7/2/2012-12/31/2012 Active Days: 131	1.16	8.37	7.89	0.00	0.02	0.51	0.53	0.01	0.47	0.47	1,301.24
Building 07/01/2012-01/31/2014	1.16	8.37	7.89	0.00	0.02	0.51	0.53	0.01	0.47	0.47	1,301.24
Building Off Road Diesel	1.03	7.87	4.56	0.00	0.00	0.49	0.49	0.00	0.45	0.45	893.39
Building Vendor Trips	0.03	0.34	0.30	0.00	0.00	0.01	0.02	0.00	0.01	0.01	80.73
Building Worker Trips	0.09	0.16	3.02	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.12
Time Slice 1/1/2013-12/13/2013 Active Days: 249	1.06	7.73	7.56	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,301.35
Building 07/01/2012-01/31/2014	1.06	7.73	7.56	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,301.35
Building Off Road Diesel	0.95	7.29	4.48	0.00	0.00	0.43	0.43	0.00	0.39	0.39	893.39
Building Vendor Trips	0.03	0.30	0.28	0.00	0.00	0.01	0.01	0.00	0.01	0.01	80.74
Building Worker Trips	0.09	0.15	2.79	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.23
Time Slice 12/16/2013-12/31/2013 Active Days: 12	**30.83**	7.75	7.86	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,336.86
Building 07/01/2012-01/31/2014	1.06	7.73	7.56	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,301.35
Building Off Road Diesel	0.95	7.29	4.48	0.00	0.00	0.43	0.43	0.00	0.39	0.39	893.39
Building Vendor Trips	0.03	0.30	0.28	0.00	0.00	0.01	0.01	0.00	0.01	0.01	80.74
Building Worker Trips	0.09	0.15	2.79	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.23
Coating 12/15/2013-01/31/2014	29.76	0.02	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.51
Architectural Coating	29.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.02	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.51

Time Slice 1/1/2014-1/31/2014 Active Days: 23	30.75	7.11	7.52	0.00	0.02	0.39	0.41	0.01	0.36	0.36	1,336.98
Building 07/01/2012-01/31/2014	0.99	7.09	7.24	0.00	0.02	0.39	0.41	0.01	0.36	0.36	1,301.46
Building Off Road Diesel	0.88	6.70	4.39	0.00	0.00	0.37	0.37	0.00	0.34	0.34	893.39
Building Vendor Trips	0.02	0.26	0.26	0.00	0.00	0.01	0.01	0.00	0.01	0.01	80.74
Building Worker Trips	0.08	0.13	2.59	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.33
Coating 12/15/2013-01/31/2014	29.76	0.01	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.52
Architectural Coating	29.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.01	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.52

Phase Assumptions

Phase: Mass Grading 5/1/2012 - 5/31/2012 - Default Mass Site Grading Description

Total Acres Disturbed: 5.74

Maximum Daily Acreage Disturbed: 2

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 6/1/2012 - 6/15/2012 - Default Trenching Description

Off-Road Equipment:

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

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Phase: Paving 6/16/2012 - 6/30/2012 - Default Paving Description

Acres to be Paved: 5.74

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

Phase: Building Construction 7/1/2012 - 1/31/2014 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 12/15/2013 - 1/31/2014 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

Time Slice 5/1/2012-5/31/2012 Active Days: 23	2.72	**22.00**	**12.46**	0.00	16.34	1.07	17.42	3.41	0.99	4.40	**2,349.54**
Mass Grading 05/01/2012-05/31/2012	2.72	22.00	12.46	0.00	16.34	1.07	17.42	3.41	0.99	4.40	2,349.54
Mass Grading Dust	0.00	0.00	0.00	0.00	16.34	0.00	16.34	3.41	0.00	3.41	0.00
Mass Grading Off Road Diesel	2.69	21.95	11.51	0.00	0.00	1.07	1.07	0.00	0.99	0.99	2,247.32
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.03	0.05	0.94	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.23
Time Slice 6/1/2012-6/15/2012 Active Days: 11	1.83	15.29	8.95	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.86
Trenching 06/01/2012-06/15/2012	1.83	15.29	8.95	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.86
Trenching Off Road Diesel	1.80	15.24	8.01	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,714.64
Trenching Worker Trips	0.03	0.05	0.94	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.23
Time Slice 6/18/2012-6/29/2012 Active Days: 10	3.91	17.20	11.24	**0.01**	0.03	**1.31**	1.34	0.01	**1.20**	1.21	1,959.16
Asphalt 06/16/2012-06/30/2012	3.91	17.20	11.24	0.01	0.03	1.31	1.34	0.01	1.20	1.21	1,959.16
Paving Off-Gas	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.23	13.48	8.10	0.00	0.00	1.17	1.17	0.00	1.07	1.07	1,131.92
Paving On Road Diesel	0.25	3.62	1.25	0.01	0.02	0.14	0.16	0.01	0.12	0.13	622.80
Paving Worker Trips	0.06	0.10	1.89	0.00	0.01	0.01	0.02	0.00	0.00	0.01	204.45
Time Slice 7/2/2012-12/31/2012 Active Days: 131	1.16	8.37	7.89	0.00	0.02	0.51	0.53	0.01	0.47	0.47	1,301.24
Building 07/01/2012-01/31/2014	1.16	8.37	7.89	0.00	0.02	0.51	0.53	0.01	0.47	0.47	1,301.24
Building Off Road Diesel	1.03	7.87	4.56	0.00	0.00	0.49	0.49	0.00	0.45	0.45	893.39
Building Vendor Trips	0.03	0.34	0.30	0.00	0.00	0.01	0.02	0.00	0.01	0.01	80.73
Building Worker Trips	0.09	0.16	3.02	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.12

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Time Slice 1/1/2013-12/13/2013 Active Days: 249	1.06	7.73	7.56	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,301.35
Building 07/01/2012-01/31/2014	1.06	7.73	7.56	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,301.35
Building Off Road Diesel	0.95	7.29	4.48	0.00	0.00	0.43	0.43	0.00	0.39	0.39	893.39
Building Vendor Trips	0.03	0.30	0.28	0.00	0.00	0.01	0.01	0.00	0.01	0.01	80.74
Building Worker Trips	0.09	0.15	2.79	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.23
Time Slice 12/16/2013-12/31/2013 Active Days: 12	10.74	7.75	7.86	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,336.86
Building 07/01/2012-01/31/2014	1.06	7.73	7.56	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,301.35
Building Off Road Diesel	0.95	7.29	4.48	0.00	0.00	0.43	0.43	0.00	0.39	0.39	893.39
Building Vendor Trips	0.03	0.30	0.28	0.00	0.00	0.01	0.01	0.00	0.01	0.01	80.74
Building Worker Trips	0.09	0.15	2.79	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.23
Coating 12/15/2013-01/31/2014	9.68	0.02	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.51
Architectural Coating	9.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.02	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.51
Time Slice 1/1/2014-1/31/2014 Active Days: 23	18.10	7.11	7.52	0.00	0.02	0.39	0.41	0.01	0.36	0.36	1,336.98
Building 07/01/2012-01/31/2014	0.99	7.09	7.24	0.00	0.02	0.39	0.41	0.01	0.36	0.36	1,301.46
Building Off Road Diesel	0.88	6.70	4.39	0.00	0.00	0.37	0.37	0.00	0.34	0.34	893.39
Building Vendor Trips	0.02	0.26	0.26	0.00	0.00	0.01	0.01	0.00	0.01	0.01	80.74
Building Worker Trips	0.08	0.13	2.59	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.33
Coating 12/15/2013-01/31/2014	17.12	0.01	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.52
Architectural Coating	17.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.01	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.52

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Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 5/1/2012 - 5/31/2012 - Default Mass Site Grading Description

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

The following mitigation measures apply to Phase: Architectural Coating 12/15/2013 - 1/31/2014 - Default Architectural Coating Description

For Residential Architectural Coating Measures, the Residential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Residential Architectural Coating Measures, the Residential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.02	0.33	0.28	0.00	0.00	0.00	400.00
Hearth							
Landscaping - No Winter Emissions							
Consumer Products	0.00						
Architectural Coatings	0.29						
TOTALS (lbs/day, unmitigated)	0.31	0.33	0.28	0.00	0.00	0.00	400.00

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Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Goverment office building	2.84	5.02	33.74	0.03	5.26	1.02	2,652.20
TOTALS (lbs/day, unmitigated)	2.84	5.02	33.74	0.03	5.26	1.02	2,652.20

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Temperature (F): 40 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Goverment office building		8.06	1000 sq ft	50.00	403.00	3,048.70
					403.00	3,048.70

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	48.6	0.8	99.0	0.2
Light Truck < 3750 lbs	10.9	1.8	93.6	4.6
Light Truck 3751-5750 lbs	21.8	0.5	99.5	0.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med Truck 5751-8500 lbs	9.6	1.0	99.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	76.5	23.5
Lite-Heavy Truck 10,001-14,000 lbs	0.7	0.0	42.9	57.1
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.5	60.0	40.0	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Goverment office building				10.0	5.0	85.0

Operational Changes to Defaults

07/14/10
14:37:28

```
 ***  SCREEN3 MODEL RUN  ***
 *** VERSION DATED 96043 ***

C:\Documents and Settings\KCHIENE\My Documents\Lakes\Screen View\ConstructionCO

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE                =         AREA
   EMISSION RATE (G/(S-M**2))  =     0.281600E-05
   SOURCE HEIGHT (M)          =       3.0000
   LENGTH OF LARGER SIDE (M)   =     152.4100
   LENGTH OF SMALLER SIDE (M)  =     152.4100
   RECEPTOR HEIGHT (M)        =       1.5000
   URBAN/RURAL OPTION         =        URBAN
THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

   MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION


BUOY. FLUX =    0.000 M**4/S**3;  MOM. FLUX =    0.000 M**4/S**2.

*** FULL METEOROLOGY ***

**********************************
*** SCREEN AUTOMATED DISTANCES ***
**********************************

*** TERRAIN HEIGHT OF    0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

  DIST     CONC             U10M   USTK  MIX HT   PLUME  MAX DIR
   (M)   (UG/M**3)   STAB  (M/S)  (M/S)    (M)   HT (M)   (DEG)
-------  ----------  ----  -----  -----  ------  ------  -------
     1.   35.00        5     1.0    1.0 10000.0    3.00     45.
   100.   53.96        5     1.0    1.0 10000.0    3.00     45.
   200.   31.29        5     1.0    1.0 10000.0    3.00     45.
   300.   19.29        5     1.0    1.0 10000.0    3.00     45.
   400.   13.60        5     1.0    1.0 10000.0    3.00     45.
   500.   10.25        5     1.0    1.0 10000.0    3.00     45.
   600.   8.064        5     1.0    1.0 10000.0    3.00     45.
   700.   6.547        5     1.0    1.0 10000.0    3.00     42.
   800.   5.449        5     1.0    1.0 10000.0    3.00     45.
   900.   4.627        5     1.0    1.0 10000.0    3.00     45.
  1000.   3.995        5     1.0    1.0 10000.0    3.00     45.

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND     1. M:
   115.   56.05        5     1.0    1.0 10000.0    3.00     45.

     ***************************************
     *** SUMMARY OF SCREEN MODEL RESULTS ***
     ***************************************

 CALCULATION        MAX CONC    DIST TO   TERRAIN
  PROCEDURE        (UG/M**3)    MAX (M)    HT (M)
-------------    -----------   -------   -------
SIMPLE TERRAIN      56.05          115.        0.

************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
************************************************
```

07/14/10

15:09:59
  *** SCREEN3 MODEL RUN ***
  *** VERSION DATED 96043 ***

 C:\Documents and Settings\KCHIENE\My Documents\Lakes\Screen View
\ConstructionCO

 SIMPLE TERRAIN INPUTS:
    SOURCE TYPE   =   AREA
    EMISSION RATE (G/(S-M**2)) =   0.497210E-05
    SOURCE HEIGHT (M)   =   3.0000
    LENGTH OF LARGER SIDE (M)   =   152.4100
    LENGTH OF SMALLER SIDE (M) =   152.4100
    RECEPTOR HEIGHT (M)   =   1.5000
    URBAN/RURAL OPTION   =   URBAN
 THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
 THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

    MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION

 BUOY. FLUX =   0.000 M**4/S**3; MOM. FLUX =   0.000 M**4/S**2.

 *** FULL METEOROLOGY ***

 ****
 *** SCREEN AUTOMATED DISTANCES ***
 ****

 *** TERRAIN HEIGHT OF   0. M ABOVE STACK BASE USED FOR FOLLOWING
DISTANCES ***

   DIST   CONC   U10M   USTK MIX HT   PLUME MAX DIR
    (M)   (UG/M**3)   STAB (M/S) (M/S)   (M)   HT (M)   (DEG)
 ------- ---------- ---- ----- ----- ------ ------ -------
      1.   61.79   5   1.0   1.0 10000.0   3.00   45.
    100.   95.28   5   1.0   1.0 10000.0   3.00   45.
    200.   55.25   5   1.0   1.0 10000.0   3.00   45.
    300.   34.06   5   1.0   1.0 10000.0   3.00   45.
    400.   24.01   5   1.0   1.0 10000.0   3.00   45.
    500.   18.10   5   1.0   1.0 10000.0   3.00   45.
    600.   14.24   5   1.0   1.0 10000.0   3.00   45.
    700.   11.56   5   1.0   1.0 10000.0   3.00   42.
    800.   9.622   5   1.0   1.0 10000.0   3.00   45.
    900.   8.170   5   1.0   1.0 10000.0   3.00   45.
   1000.   7.053   5   1.0   1.0 10000.0   3.00   45.

 MAXIMUM 1-HR CONCENTRATION AT OR BEYOND   1. M:
    115.   98.96   5   1.0   1.0 10000.0   3.00   45.

      ****
      *** SUMMARY OF SCREEN MODEL RESULTS ***
      ****

  CALCULATION   MAX CONC   DIST TO   TERRAIN
   PROCEDURE   (UG/M**3)   MAX (M)   HT (M)
 --------------   -----------   -------   -------

SIMPLE TERRAIN 98.96 115. 0.

****
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
****

07/14/10

15:14:17
  *** SCREEN3 MODEL RUN ***
  *** VERSION DATED 96043 ***

 C:\Documents and Settings\KCHIENE\My Documents\Lakes\Screen View
\ConstructionCO

 SIMPLE TERRAIN INPUTS:
    SOURCE TYPE   =   AREA
    EMISSION RATE (G/(S-M**2)) =   0.928430E-05
    SOURCE HEIGHT (M)   =   3.0000
    LENGTH OF LARGER SIDE (M)   =   152.4100
    LENGTH OF SMALLER SIDE (M) =   152.4100
    RECEPTOR HEIGHT (M)   =   1.5000
    URBAN/RURAL OPTION   =   URBAN
 THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
 THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

    MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION

 BUOY. FLUX =   0.000 M**4/S**3; MOM. FLUX =   0.000 M**4/S**2.

 *** FULL METEOROLOGY ***

 ****
 *** SCREEN AUTOMATED DISTANCES ***
 ****

 *** TERRAIN HEIGHT OF   0. M ABOVE STACK BASE USED FOR FOLLOWING
DISTANCES ***

   DIST   CONC   U10M   USTK MIX HT   PLUME MAX DIR
    (M)   (UG/M**3)   STAB (M/S) (M/S)   (M)   HT (M)   (DEG)
 ------- ---------- ---- ----- ----- ------ ------ -------
      1.   115.4   5   1.0   1.0 10000.0   3.00   45.
    100.   177.9   5   1.0   1.0 10000.0   3.00   45.
    200.   103.2   5   1.0   1.0 10000.0   3.00   45.
    300.   63.60   5   1.0   1.0 10000.0   3.00   45.
    400.   44.84   5   1.0   1.0 10000.0   3.00   45.
    500.   33.79   5   1.0   1.0 10000.0   3.00   45.
    600.   26.59   5   1.0   1.0 10000.0   3.00   45.
    700.   21.59   5   1.0   1.0 10000.0   3.00   42.
    800.   17.97   5   1.0   1.0 10000.0   3.00   45.
    900.   15.26   5   1.0   1.0 10000.0   3.00   45.
   1000.   13.17   5   1.0   1.0 10000.0   3.00   45.

 MAXIMUM 1-HR CONCENTRATION AT OR BEYOND   1. M:
    115.   184.8   5   1.0   1.0 10000.0   3.00   45.

      ****
      *** SUMMARY OF SCREEN MODEL RESULTS ***
      ****

  CALCULATION   MAX CONC   DIST TO   TERRAIN
   PROCEDURE   (UG/M**3)   MAX (M)   HT (M)
 --------------   -----------   -------   -------

SIMPLE TERRAIN 184.8 115. 0.

****
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
****

07/14/10

15:16:34
  *** SCREEN3 MODEL RUN ***
  *** VERSION DATED 96043 ***

 C:\Documents and Settings\KCHIENE\My Documents\Lakes\Screen View
\ConstructionCO

 SIMPLE TERRAIN INPUTS:
    SOURCE TYPE   =   AREA
    EMISSION RATE (G/(S-M**2)) =   0.211090E-05
    SOURCE HEIGHT (M)   =   3.0000
    LENGTH OF LARGER SIDE (M)   =   152.4100
    LENGTH OF SMALLER SIDE (M) =   152.4100
    RECEPTOR HEIGHT (M)   =   1.5000
    URBAN/RURAL OPTION   =   URBAN
 THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
 THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

    MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION

 BUOY. FLUX =   0.000 M**4/S**3; MOM. FLUX =   0.000 M**4/S**2.

 *** FULL METEOROLOGY ***

 ****
 *** SCREEN AUTOMATED DISTANCES ***
 ****

 *** TERRAIN HEIGHT OF   0. M ABOVE STACK BASE USED FOR FOLLOWING
DISTANCES ***

   DIST   CONC   U10M   USTK MIX HT   PLUME MAX DIR
    (M)   (UG/M**3)   STAB (M/S) (M/S)   (M)   HT (M)   (DEG)
 ------- ---------- ---- ----- ----- ------ ------ -------
      1.   26.23   5   1.0   1.0 10000.0   3.00   45.
    100.   40.45   5   1.0   1.0 10000.0   3.00   45.
    200.   23.46   5   1.0   1.0 10000.0   3.00   45.
    300.   14.46   5   1.0   1.0 10000.0   3.00   45.
    400.   10.20   5   1.0   1.0 10000.0   3.00   45.
    500.   7.683   5   1.0   1.0 10000.0   3.00   45.
    600.   6.045   5   1.0   1.0 10000.0   3.00   45.
    700.   4.908   5   1.0   1.0 10000.0   3.00   42.
    800.   4.085   5   1.0   1.0 10000.0   3.00   45.
    900.   3.469   5   1.0   1.0 10000.0   3.00   45.
   1000.   2.994   5   1.0   1.0 10000.0   3.00   45.

 MAXIMUM 1-HR CONCENTRATION AT OR BEYOND   1. M:
    115.   42.02   5   1.0   1.0 10000.0   3.00   45.

      ****
      *** SUMMARY OF SCREEN MODEL RESULTS ***
      ****

  CALCULATION   MAX CONC   DIST TO   TERRAIN
   PROCEDURE   (UG/M**3)   MAX (M)   HT (M)
 --------------   -----------   -------   -------

SIMPLE TERRAIN 42.02 115. 0.

****
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
****

07/14/10

15:19:22
  *** SCREEN3 MODEL RUN ***
  *** VERSION DATED 96043 ***

 C:\Documents and Settings\KCHIENE\My Documents\Lakes\Screen View
\ConstructionCO

 SIMPLE TERRAIN INPUTS:
    SOURCE TYPE   =   AREA
    EMISSION RATE (G/(S-M**2)) =   0.735650E-05
    SOURCE HEIGHT (M)   =   3.0000
    LENGTH OF LARGER SIDE (M)   =   152.4100
    LENGTH OF SMALLER SIDE (M) =   152.4100
    RECEPTOR HEIGHT (M)   =   1.5000
    URBAN/RURAL OPTION   =   URBAN
 THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
 THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

    MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION

 BUOY. FLUX =   0.000 M**4/S**3; MOM. FLUX =   0.000 M**4/S**2.

 *** FULL METEOROLOGY ***

 ****
 *** SCREEN AUTOMATED DISTANCES ***
 ****

 *** TERRAIN HEIGHT OF   0. M ABOVE STACK BASE USED FOR FOLLOWING
DISTANCES ***

   DIST   CONC   U10M   USTK MIX HT   PLUME MAX DIR
    (M)   (UG/M**3)   STAB (M/S) (M/S)   (M)   HT (M)   (DEG)
 ------- ---------- ---- ----- ----- ------ ------ -------
      1.   91.42   5   1.0   1.0 10000.0   3.00   45.
    100.   141.0   5   1.0   1.0 10000.0   3.00   45.
    200.   81.74   5   1.0   1.0 10000.0   3.00   45.
    300.   50.40   5   1.0   1.0 10000.0   3.00   45.
    400.   35.53   5   1.0   1.0 10000.0   3.00   45.
    500.   26.78   5   1.0   1.0 10000.0   3.00   45.
    600.   21.07   5   1.0   1.0 10000.0   3.00   45.
    700.   17.10   5   1.0   1.0 10000.0   3.00   42.
    800.   14.24   5   1.0   1.0 10000.0   3.00   45.
    900.   12.09   5   1.0   1.0 10000.0   3.00   45.
   1000.   10.44   5   1.0   1.0 10000.0   3.00   45.

 MAXIMUM 1-HR CONCENTRATION AT OR BEYOND   1. M:
    115.   146.4   5   1.0   1.0 10000.0   3.00   45.

      ****
      *** SUMMARY OF SCREEN MODEL RESULTS ***
      ****

  CALCULATION   MAX CONC   DIST TO   TERRAIN
   PROCEDURE   (UG/M**3)   MAX (M)   HT (M)
 --------------   -----------   -------   -------

SIMPLE TERRAIN 146.4 115. 0.

****
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
****

07/14/10

15:29:13
  *** SCREEN3 MODEL RUN ***
  *** VERSION DATED 96043 ***

 C:\Documents and Settings\KCHIENE\My Documents\Lakes\Screen View
\ConstructionCO

 SIMPLE TERRAIN INPUTS:
    SOURCE TYPE   =   AREA
    EMISSION RATE (G/(S-M**2)) =   0.858820E-06
    SOURCE HEIGHT (M)   =   3.0000
    LENGTH OF LARGER SIDE (M)   =   152.4100
    LENGTH OF SMALLER SIDE (M) =   152.4100
    RECEPTOR HEIGHT (M)   =   1.5000
    URBAN/RURAL OPTION   =   URBAN
 THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
 THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

    MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION

 BUOY. FLUX =   0.000 M**4/S**3; MOM. FLUX =   0.000 M**4/S**2.

 *** FULL METEOROLOGY ***

 ****
 *** SCREEN AUTOMATED DISTANCES ***
 ****

 *** TERRAIN HEIGHT OF   0. M ABOVE STACK BASE USED FOR FOLLOWING
DISTANCES ***

   DIST   CONC   U10M   USTK MIX HT   PLUME MAX DIR
    (M)   (UG/M**3)   STAB (M/S) (M/S)   (M)   HT (M)   (DEG)
 ------- ---------- ---- ----- ----- ------ ------ -------
      1.   10.67   5   1.0   1.0 10000.0   3.00   45.
    100.   16.46   5   1.0   1.0 10000.0   3.00   45.
    200.   9.543   5   1.0   1.0 10000.0   3.00   45.
    300.   5.883   5   1.0   1.0 10000.0   3.00   45.
    400.   4.148   5   1.0   1.0 10000.0   3.00   45.
    500.   3.126   5   1.0   1.0 10000.0   3.00   45.
    600.   2.459   5   1.0   1.0 10000.0   3.00   45.
    700.   1.997   5   1.0   1.0 10000.0   3.00   42.
    800.   1.662   5   1.0   1.0 10000.0   3.00   45.
    900.   1.411   5   1.0   1.0 10000.0   3.00   45.
   1000.   1.218   5   1.0   1.0 10000.0   3.00   45.

 MAXIMUM 1-HR CONCENTRATION AT OR BEYOND   1. M:
    115.   17.09   5   1.0   1.0 10000.0   3.00   45.

      ****
      *** SUMMARY OF SCREEN MODEL RESULTS ***
      ****

  CALCULATION   MAX CONC   DIST TO   TERRAIN
   PROCEDURE   (UG/M**3)   MAX (M)   HT (M)
 --------------   -----------   -------   -------

SIMPLE TERRAIN 17.09 115. 0.

****
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
****

07/14/10

15:31:32
  *** SCREEN3 MODEL RUN ***
  *** VERSION DATED 96043 ***

 C:\Documents and Settings\KCHIENE\My Documents\Lakes\Screen View
\ConstructionCO

 SIMPLE TERRAIN INPUTS:
    SOURCE TYPE   =   AREA
    EMISSION RATE (G/(S-M**2)) =   0.119110E-05
    SOURCE HEIGHT (M)   =   3.0000
    LENGTH OF LARGER SIDE (M)   =   152.4100
    LENGTH OF SMALLER SIDE (M) =   152.4100
    RECEPTOR HEIGHT (M)   =   1.5000
    URBAN/RURAL OPTION   =   URBAN
 THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
 THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

    MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION

 BUOY. FLUX =   0.000 M**4/S**3; MOM. FLUX =   0.000 M**4/S**2.

 *** FULL METEOROLOGY ***

 ****
 *** SCREEN AUTOMATED DISTANCES ***
 ****

 *** TERRAIN HEIGHT OF   0. M ABOVE STACK BASE USED FOR FOLLOWING
DISTANCES ***

   DIST   CONC   U10M   USTK MIX HT   PLUME MAX DIR
    (M)   (UG/M**3)   STAB (M/S) (M/S)   (M)   HT (M)   (DEG)
 ------- ---------- ---- ----- ----- ------ ------ -------
      1.   14.80   5   1.0   1.0 10000.0   3.00   45.
    100.   22.82   5   1.0   1.0 10000.0   3.00   45.
    200.   13.24   5   1.0   1.0 10000.0   3.00   45.
    300.   8.160   5   1.0   1.0 10000.0   3.00   45.
    400.   5.753   5   1.0   1.0 10000.0   3.00   45.
    500.   4.335   5   1.0   1.0 10000.0   3.00   45.
    600.   3.411   5   1.0   1.0 10000.0   3.00   45.
    700.   2.769   5   1.0   1.0 10000.0   3.00   42.
    800.   2.305   5   1.0   1.0 10000.0   3.00   45.
    900.   1.957   5   1.0   1.0 10000.0   3.00   45.
   1000.   1.690   5   1.0   1.0 10000.0   3.00   45.

 MAXIMUM 1-HR CONCENTRATION AT OR BEYOND   1. M:
    115.   23.71   5   1.0   1.0 10000.0   3.00   45.

      ****
      *** SUMMARY OF SCREEN MODEL RESULTS ***
      ****

  CALCULATION   MAX CONC   DIST TO   TERRAIN
   PROCEDURE   (UG/M**3)   MAX (M)   HT (M)
 --------------   -----------   -------   -------

SIMPLE TERRAIN 23.71 115. 0.

****
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
****

07/14/10

15:33:37
  *** SCREEN3 MODEL RUN ***
  *** VERSION DATED 96043 ***

 C:\Documents and Settings\KCHIENE\My Documents\Lakes\Screen View
\ConstructionCO

 SIMPLE TERRAIN INPUTS:
    SOURCE TYPE   =   AREA
    EMISSION RATE (G/(S-M**2)) =   0.232790E-06
    SOURCE HEIGHT (M)   =   3.0000
    LENGTH OF LARGER SIDE (M)   =   152.4100
    LENGTH OF SMALLER SIDE (M) =   152.4100
    RECEPTOR HEIGHT (M)   =   1.5000
    URBAN/RURAL OPTION   =   URBAN
 THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
 THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

    MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION

 BUOY. FLUX =   0.000 M**4/S**3; MOM. FLUX =   0.000 M**4/S**2.

 *** FULL METEOROLOGY ***

 ****
 *** SCREEN AUTOMATED DISTANCES ***
 ****

 *** TERRAIN HEIGHT OF   0. M ABOVE STACK BASE USED FOR FOLLOWING
DISTANCES ***

   DIST   CONC   U10M   USTK MIX HT   PLUME MAX DIR
    (M)   (UG/M**3)   STAB (M/S) (M/S)   (M)   HT (M)   (DEG)
 ------- ---------- ---- ----- ----- ------ ------ -------
      1.   2.893   5   1.0   1.0 10000.0   3.00   45.
    100.   4.461   5   1.0   1.0 10000.0   3.00   45.
    200.   2.587   5   1.0   1.0 10000.0   3.00   45.
    300.   1.595   5   1.0   1.0 10000.0   3.00   45.
    400.   1.124   5   1.0   1.0 10000.0   3.00   45.
    500. 0.8473   5   1.0   1.0 10000.0   3.00   45.
    600. 0.6666   5   1.0   1.0 10000.0   3.00   45.
    700. 0.5413   5   1.0   1.0 10000.0   3.00   42.
    800. 0.4505   5   1.0   1.0 10000.0   3.00   45.
    900. 0.3825   5   1.0   1.0 10000.0   3.00   45.
   1000. 0.3302   5   1.0   1.0 10000.0   3.00   45.

 MAXIMUM 1-HR CONCENTRATION AT OR BEYOND   1. M:
    115.   4.633   5   1.0   1.0 10000.0   3.00   45.

      ****
      *** SUMMARY OF SCREEN MODEL RESULTS ***
      ****

  CALCULATION   MAX CONC   DIST TO   TERRAIN
   PROCEDURE   (UG/M**3)   MAX (M)   HT (M)
 --------------   -----------   -------   -------

SIMPLE TERRAIN 4.633 115. 0.

****
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
****

Title : Lake County Air Basin Subarea Winter CYr 2015 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2010/07/13 16:15:33
Scen Year: 2015 -- All model years in the range 1971 to 2015 selected
Season : Winter
Area : Lake (LC)

****

Year: 2015 -- Model Years 1971 to 2015 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

Lake (LC) Lake (LC) Lake (LC)

Table 1: Running Exhaust Emissions (grams/mile)

Pollutant Name: Reactive Org Gases Temperature: 70F Relative Humidity: 0%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.408	0.646	0.643	3.992	6.115	4.746	0.721
35	0.073	0.125	0.117	0.481	0.971	1.910	0.141

Pollutant Name: Carbon Monoxide Temperature: 70F Relative Humidity: 0%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	4.326	8.096	6.273	33.570	36.820	24.989	7.426
35	2.230	3.827	2.542	6.787	7.088	16.281	3.300

Pollutant Name: Oxides of Nitrogen Temperature: 70F Relative Humidity: 0%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.462	0.967	1.580	12.910	14.236	1.338	1.233
35	0.266	0.548	0.946	6.434	8.101	1.305	0.686

Pollutant Name: Carbon Dioxide Temperature: 70F Relative Humidity: 0%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	945.556	1161.349	1682.914	2611.395	2453.472	258.659	1167.527
35	308.007	384.654	519.841	1282.188	1660.838	134.622	395.307

Pollutant Name: Sulfur Dioxide Temperature: 70F Relative Humidity: 0%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.009	0.011	0.016	0.025	0.024	0.003	0.011
35	0.003	0.004	0.005	0.012	0.016	0.002	0.004

Pollutant Name: PM2.5 Temperature: 70F Relative Humidity: 0%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.052	0.093	0.096	0.551	0.226	0.029	0.090
35	0.009	0.017	0.018	0.150	0.053	0.013	0.018

Pollutant Name: PM2.5 - Tire Wear Temperature: 70F Relative Humidity: 0%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.002	0.002	0.002	0.005	0.002	0.001	0.002
35	0.002	0.002	0.002	0.005	0.002	0.001	0.002

Pollutant Name: PM2.5 - Brake Wear Temperature: 70F Relative Humidity: 0%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.005	0.005	0.005	0.008	0.005	0.003	0.005
35	0.005	0.005	0.005	0.008	0.005	0.003	0.005

Pollutant Name: Gasoline - mi/gal Temperature: 70F Relative Humidity: 0%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	9.286	7.380	4.903	3.339	3.300	28.296	8.219
35	28.445	22.589	16.900	16.898	16.741	53.231	24.931

Pollutant Name: Diesel - mi/gal Temperature: 70F Relative Humidity: 0%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	28.298	29.070	19.538	4.688	4.175	0.000	15.502
35	28.298	29.070	19.538	6.114	4.175	0.000	16.105

Title : Lake County Air Basin Subarea Winter CYr 2015 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2010/07/13 16:15:33
Scen Year: 2015 -- All model years in the range 1971 to 2015 selected
Season : Winter
Area : Lake (LC)
****
*****

Year: 2015 -- Model Years 1971 to 2015 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

Lake (LC) Lake (LC) Lake (LC)

Table 2: Starting Emissions (grams/trip)

Pollutant Name: Reactive Org Gases Temperature: 70F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.070	0.123	0.115	1.057	0.284	0.851	0.164
10	0.124	0.207	0.207	1.329	0.553	0.968	0.249
20	0.225	0.362	0.379	1.848	1.049	1.202	0.409
30	0.316	0.503	0.536	2.335	1.487	1.435	0.555
40	0.397	0.629	0.679	2.789	1.868	1.667	0.687
50	0.469	0.739	0.808	3.211	2.191	1.898	0.805
60	0.529	0.830	0.920	3.523	2.456	2.055	0.901
120	0.669	1.000	1.232	3.673	2.704	2.234	1.086
180	0.664	1.008	1.254	3.924	2.869	2.303	1.106
240	0.703	1.067	1.330	4.170	3.029	2.457	1.172
300	0.741	1.125	1.404	4.410	3.183	2.609	1.237
360	0.778	1.181	1.477	4.646	3.333	2.758	1.301
420	0.814	1.236	1.549	4.876	3.477	2.905	1.363
480	0.850	1.289	1.619	5.101	3.616	3.049	1.423
540	0.884	1.341	1.688	5.320	3.750	3.192	1.482
600	0.917	1.391	1.756	5.535	3.878	3.331	1.540
660	0.950	1.440	1.822	5.744	4.001	3.469	1.596
720	0.982	1.487	1.887	5.948	4.119	3.604	1.651

Pollutant Name: Carbon Monoxide Temperature: 70F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.716	1.359	1.256	10.818	4.255	3.756	1.651
10	1.304	2.372	2.292	14.218	8.338	4.086	2.629
20	2.419	4.285	4.259	20.667	15.984	4.741	4.484
30	3.451	6.049	6.087	26.647	22.938	5.392	6.200
40	4.401	7.664	7.778	32.159	29.201	6.037	7.779
50	5.268	9.129	9.330	37.204	34.773	6.677	9.220
60	6.052	10.445	10.744	41.781	39.652	7.312	10.524
120	8.420	13.774	14.635	48.918	45.483	10.593	13.810

180	7.976	13.337	14.422	52.757	46.812	10.954	13.652
240	8.433	14.039	15.330	56.370	48.186	12.244	14.468
300	8.856	14.697	16.161	59.757	49.603	13.415	15.227
360	9.245	15.313	16.913	62.919	51.064	14.468	15.928
420	9.599	15.886	17.587	65.854	52.569	15.401	16.572
480	9.919	16.417	18.182	68.563	54.118	16.215	17.159
540	10.205	16.904	18.700	71.047	55.710	16.911	17.689
600	10.456	17.349	19.139	73.304	57.347	17.488	18.161
660	10.672	17.751	19.500	75.336	59.027	17.946	18.576
720	10.854	18.110	19.782	77.141	60.751	18.285	18.934

Pollutant Name: Oxides of Nitrogen Temperature: 70F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.251	0.391	1.005	0.963	1.261	0.175	0.480
10	0.288	0.456	1.123	1.412	1.900	0.210	0.565
20	0.354	0.572	1.332	2.202	3.022	0.271	0.715
30	0.408	0.667	1.506	2.847	3.936	0.322	0.838
40	0.451	0.743	1.646	3.346	4.643	0.362	0.936
50	0.483	0.798	1.751	3.699	5.142	0.393	1.008
60	0.504	0.834	1.821	3.907	5.433	0.413	1.053
120	0.529	0.872	1.932	3.936	5.472	0.416	1.099
180	0.531	0.874	1.932	3.919	5.452	0.410	1.099
240	0.527	0.868	1.918	3.893	5.421	0.402	1.091
300	0.522	0.858	1.897	3.858	5.380	0.392	1.080
360	0.514	0.846	1.868	3.815	5.328	0.380	1.064
420	0.504	0.830	1.831	3.763	5.266	0.366	1.045
480	0.493	0.811	1.787	3.703	5.192	0.350	1.022
540	0.479	0.790	1.735	3.635	5.109	0.331	0.995
600	0.464	0.765	1.675	3.557	5.014	0.311	0.965
660	0.446	0.737	1.608	3.472	4.909	0.288	0.930
720	0.427	0.706	1.533	3.377	4.793	0.264	0.892

Pollutant Name: Carbon Dioxide Temperature: 70F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	11.158	13.136	19.045	17.345	3.753	17.843	13.809
10	13.297	16.067	22.635	21.839	7.485	20.201	16.647
20	17.960	22.319	30.485	30.700	14.887	24.816	22.728
30	23.135	29.093	39.228	39.394	22.206	29.297	29.348
40	28.822	36.387	48.865	47.920	29.442	33.644	36.506
50	35.022	44.203	59.394	56.279	36.595	37.857	44.203
60	41.734	52.539	70.816	64.470	43.665	41.935	52.438
120	89.824	108.706	153.282	100.658	74.266	60.475	108.813
180	102.636	124.412	175.141	112.595	87.740	63.818	124.192
240	115.241	139.770	196.663	123.830	100.419	66.965	139.259
300	127.639	154.779	217.849	134.361	112.302	69.917	154.016
360	139.831	169.440	238.698	144.190	123.390	72.674	168.461
420	151.816	183.753	259.211	153.315	133.683	75.236	182.595
480	163.595	197.717	279.387	161.738	143.180	77.602	196.419
540	175.167	211.334	299.227	169.458	151.883	79.772	209.931
600	186.532	224.602	318.730	176.475	159.790	81.748	223.132
660	197.690	237.522	337.896	182.788	166.901	83.528	236.022

720	208.642	250.093	356.726	188.399	173.218	85.113	248.601

Pollutant Name: Sulfur Dioxide Temperature: 70F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.001	0.000	0.000	0.000
30	0.000	0.000	0.000	0.001	0.001	0.000	0.000
40	0.000	0.000	0.001	0.001	0.001	0.000	0.000
50	0.000	0.001	0.001	0.001	0.001	0.001	0.001
60	0.001	0.001	0.001	0.001	0.001	0.001	0.001
120	0.001	0.001	0.002	0.002	0.001	0.001	0.001
180	0.001	0.001	0.002	0.002	0.002	0.001	0.001
240	0.001	0.002	0.002	0.002	0.002	0.001	0.002
300	0.001	0.002	0.002	0.002	0.002	0.001	0.002
360	0.002	0.002	0.003	0.002	0.002	0.001	0.002
420	0.002	0.002	0.003	0.003	0.002	0.001	0.002
480	0.002	0.002	0.003	0.003	0.002	0.001	0.002
540	0.002	0.002	0.003	0.003	0.002	0.001	0.002
600	0.002	0.002	0.003	0.003	0.003	0.001	0.002
660	0.002	0.003	0.004	0.003	0.003	0.001	0.003
720	0.002	0.003	0.004	0.003	0.003	0.001	0.003

Pollutant Name: PM2.5 Temperature: 70F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.001	0.001	0.001	0.001	0.001	0.007	0.001
10	0.001	0.002	0.002	0.002	0.001	0.007	0.002
20	0.003	0.005	0.003	0.002	0.002	0.005	0.003
30	0.004	0.007	0.004	0.003	0.003	0.004	0.005
40	0.005	0.009	0.005	0.004	0.004	0.003	0.006
50	0.006	0.010	0.007	0.004	0.005	0.003	0.008
60	0.007	0.012	0.008	0.005	0.005	0.003	0.009
120	0.010	0.018	0.012	0.007	0.007	0.006	0.013
180	0.011	0.019	0.013	0.007	0.007	0.008	0.014
240	0.012	0.021	0.013	0.008	0.007	0.011	0.015
300	0.013	0.022	0.014	0.008	0.008	0.013	0.016
360	0.013	0.023	0.015	0.009	0.008	0.015	0.017
420	0.014	0.024	0.015	0.009	0.008	0.016	0.018
480	0.014	0.025	0.016	0.009	0.008	0.018	0.018
540	0.015	0.026	0.016	0.010	0.009	0.019	0.019
600	0.015	0.026	0.017	0.010	0.009	0.019	0.019
660	0.015	0.027	0.017	0.010	0.009	0.020	0.020
720	0.015	0.027	0.017	0.010	0.009	0.020	0.020

Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2010/07/13 16:15:33
Scen Year: 2015 -- All model years in the range 1971 to 2015 selected
Season : Winter
Area : Lake (LC)
****
*****

Year: 2015 -- Model Years 1971 to 2015 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

Lake (LC) Lake (LC) Lake (LC)

Table 4: Hot Soak Emissions (grams/trip)

Pollutant Name: Reactive Org Gases Temperature: 70F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.136	0.183	0.058	0.067	0.088	0.203	0.137
10	0.252	0.340	0.108	0.123	0.163	0.379	0.254
20	0.431	0.582	0.185	0.211	0.278	0.662	0.436
30	0.556	0.753	0.240	0.272	0.359	0.872	0.563
40	0.603	0.818	0.261	0.295	0.389	0.956	0.612

Hot soak results are scaled to reflect zero emissions for trip lengths of less than 5 minutes (about 25% of in-use trips).

Title : Lake County Air Basin Subarea Winter CYr 2015 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2010/07/13 16:15:33
Scen Year: 2015 -- All model years in the range 1971 to 2015 selected
Season : Winter
Area : Lake (LC)
****
*****

Year: 2015 -- Model Years 1971 to 2015 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

Lake (LC) Lake (LC) Lake (LC)

Table 5a: Partial Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
70	0.218	0.327	0.113	0.029	0.005	0.452	0.260

Title : Lake County Air Basin Subarea Winter CYr 2015 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2010/07/13 16:15:33
Scen Year: 2015 -- All model years in the range 1971 to 2015 selected
Season : Winter
Area : Lake (LC)
****
*****
Year: 2015 -- Model Years 1971 to 2015 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

Lake (LC) Lake (LC) Lake (LC)

Table 5b: Multi-Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
70	0.018	0.025	0.009	0.001	0.002	0.041	0.021

Title : Lake County Air Basin Subarea Winter CYr 2015 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2010/07/13 16:15:33
Scen Year: 2015 -- All model years in the range 1971 to 2015 selected
Season : Winter
Area : Lake (LC)
****
*****
Year: 2015 -- Model Years 1971 to 2015 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

Lake (LC) Lake (LC) Lake (LC)

Table 6a: Partial Day Resting Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
70	0.083	0.129	0.048	0.013	0.002	0.142	0.100

Title : Lake County Air Basin Subarea Winter CYr 2015 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2010/07/13 16:15:33
Scen Year: 2015 -- All model years in the range 1971 to 2015 selected
Season : Winter
Area : Lake (LC)
****
*****
Year: 2015 -- Model Years 1971 to 2015 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

Lake (LC) Lake (LC) Lake (LC)

Table 6b: Multi-Day Resting Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
70	0.007	0.010	0.004	0.001	0.001	0.014	0.008

Title : Lake County Air Basin Subarea Winter CYr 2015 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2010/07/13 16:15:33
Scen Year: 2015 -- All model years in the range 1971 to 2015 selected
Season : Winter
Area : Lake (LC)
****
*****
Year: 2015 -- Model Years 1971 to 2015 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

Lake (LC) Lake (LC) Lake (LC)

Table 7: Estimated Travel Fractions

Pollutant Name: Temperature: ALL Relative Humidity: ALL

	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
%VMT	0.412	0.424	0.116	0.032	0.001	0.015	1.000
%TRIP	0.363	0.383	0.184	0.053	0.000	0.017	1.000
%VEH	0.389	0.423	0.095	0.037	0.000	0.056	1.000

Title : Lake County Air Basin Subarea Winter CYr 2015 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2010/07/13 16:15:33
Scen Year: 2015 -- All model years in the range 1971 to 2015 selected
Season : Winter
Area : Lake (LC)

****

Year: 2015 -- Model Years 1971 to 2015 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

Lake (LC) Lake (LC) Lake (LC)

Table 8: Evaporative Running Loss Emissions (grams/minute)

Pollutant Name: Reactive Org Gases Temperature: 70F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
1	0.030	0.942	0.499	1.233	0.716	0.024	0.510
2	0.031	0.493	0.262	0.655	0.373	0.062	0.275
3	0.034	0.347	0.185	0.464	0.260	0.083	0.199
4	0.038	0.276	0.148	0.369	0.205	0.096	0.163
5	0.041	0.234	0.127	0.313	0.172	0.105	0.143
10	0.050	0.156	0.087	0.203	0.109	0.132	0.106
15	0.056	0.137	0.078	0.170	0.091	0.149	0.098
20	0.061	0.134	0.077	0.156	0.085	0.163	0.099
25	0.066	0.138	0.080	0.150	0.084	0.176	0.102
30	0.069	0.145	0.084	0.156	0.088	0.184	0.107
35	0.071	0.151	0.087	0.161	0.091	0.193	0.111
40	0.073	0.157	0.091	0.167	0.095	0.201	0.116
45	0.075	0.163	0.094	0.172	0.098	0.209	0.120
50	0.077	0.168	0.097	0.177	0.101	0.215	0.123
55	0.078	0.174	0.100	0.182	0.104	0.221	0.126
60	0.079	0.179	0.103	0.187	0.107	0.227	0.130

1 CALINE4 - (DATED CALINE4x)

3.0.0 PC (32 BIT) VERSION

Run Began on 7/13/2010 at 16:30:35

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Bevins-Lakeport
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	0.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	0.0 CM/S		
CLAS=	6 (F)	VS=	0.0 CM/S		
MIXH=	1000. M	AMB=	3.5 PPM		
SIGTH=	5. DEGREES	TEMP=	15.0 DEGREE (C)		

II. LINK VARIABLES

	LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
1.	Y SB1	684	1256	711	1201	AG	262	3.3	0.0	23.3
2.	Y SB2	711	1201	745	1133	AG	220	7.4	0.0	23.3
3.	Y SB3	745	1133	800	1025	AG	226	3.3	0.0	23.3
4.	Y SB4	800	1025	858	906	AG	226	3.3	0.0	23.3
5.	Y NB1	868	911	813	1024	AG	30	3.3	0.0	23.3
6.	Y NB2	814	1024	761	1138	AG	13	3.3	0.0	23.3
7.	Y NB3	761	1138	728	1205	AG	286	3.3	0.0	23.3
8.	Y NB4	728	1205	700	1263	AG	286	3.3	0.0	23.3
9.	Y LT1	720	1198	753	1134	AG	42	7.4	0.0	23.3
10.	Y LT2	753	1134	802	1038	AG	17	7.4	0.0	23.3
11.	X EB1	596	1103	682	1125	AG	1013	3.3	0.0	24.1
12.	X EB2	682	1125	750	1141	AG	740	7.4	0.0	24.1
13.	X EB3	750	1141	826	1158	AG	782	3.3	0.0	24.1
14.	X EB4	826	1158	923	1182	AG	782	3.3	0.0	24.1
15.	X WB1	924	1170	832	1147	AG	385	3.3	0.0	24.1
16.	X WB2	832	1147	757	1128	AG	379	7.4	0.0	24.1
17.	X WB3	757	1128	687	1111	AG	396	3.3	0.0	24.1
18.	X WB4	687	1111	599	1090	AG	396	3.3	0.0	24.1
19.	X LT1	674	1115	753	1134	AG	273	7.4	0.0	24.1
20.	X LT2	753	1134	841	1157	AG	6	7.4	0.0	24.1

III. RECEPTOR LOCATIONS

	RECEPTOR	COORDINATES (M) X	Y	Z
1.	Recpt 1	805	1099	1.8
2.	Recpt 2	691	1157	1.8
3.	Recpt 3	729	1093	1.8
4.	Recpt 4	778	1179	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) 1	2	3	4	5	6	7	8
1. Recpt 1	289.	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2. Recpt 2	110.	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3. Recpt 3	359.	3.9	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
4. Recpt 4	234.	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RECEPTOR	CONC/LINK (PPM) 9	10	11	12	13	14	15	16
1. Recpt 1	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
2. Recpt 2	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1
3. Recpt 3	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
4. Recpt 4	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0

RECEPTOR	*CONC/LINK (PPM) 17	18	19	20
1. Recpt 1	0.0	0.0	0.1	0.0
2. Recpt 2	0.0	0.0	0.0	0.0
3. Recpt 3	0.0	0.0	0.1	0.0
4. Recpt 4	0.0	0.0	0.1	0.0

1

Run Ended on 7/13/2010 at 16:30:35

1 CALINE4 - (DATED CALINE4x)

3.0.0 PC (32 BIT) VERSION

Run Began on 7/13/2010 at 16:34:29

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Main-Lakeport
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	0.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	0.0 CM/S		
CLAS=	6 (F)	VS=	0.0 CM/S		
MIXH=	1000. M	AMB=	3.5 PPM		
SIGTH=	5. DEGREES	TEMP=	15.0 DEGREE (C)		

II. LINK VARIABLES

	LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
1.	Y SB1	684	1256	711	1201	AG	683	3.3	0.0	20.3
2.	Y SB2	711	1201	745	1133	AG	647	7.4	0.0	20.3
3.	Y SB3	745	1133	800	1025	AG	647	3.3	0.0	20.3
4.	Y SB4	800	1025	858	906	AG	647	3.3	0.0	20.3
5.	Y NB1	868	911	813	1024	AG	384	3.3	0.0	20.3
6.	Y NB2	814	1024	761	1138	AG	311	3.3	0.0	20.3
7.	Y NB3	761	1138	728	1205	AG	714	3.3	0.0	20.3
8.	Y NB4	728	1205	700	1263	AG	714	3.3	0.0	20.3
9.	Y LT1	720	1198	753	1134	AG	36	7.4	0.0	20.3
10.	Y LT2	753	1134	802	1038	AG	73	7.4	0.0	20.3
11.	X EB1	596	1103	682	1125	AG	521	3.3	0.0	16.2
12.	X EB2	682	1125	750	1141	AG	118	7.4	0.0	16.2
13.	X EB3	750	1141	826	1158	AG	154	3.3	0.0	16.2
14.	X EB4	826	1158	923	1182	AG	154	3.3	0.0	16.2
15.	X WB1	924	1170	832	1147	AG	3	3.3	0.0	16.2
16.	X WB2	832	1147	757	1128	AG	3	7.4	0.0	16.2
17.	X WB3	757	1128	687	1111	AG	76	3.3	0.0	16.2
18.	X WB4	687	1111	599	1090	AG	76	3.3	0.0	16.2
19.	X LT1	674	1115	753	1134	AG	403	7.4	0.0	16.2
20.	X LT2	753	1134	841	1157	AG	0	7.4	0.0	16.2

III. RECEPTOR LOCATIONS

	RECEPTOR	COORDINATES (M) X	Y	Z
1.	Recpt 1	805	1099	1.8
2.	Recpt 2	691	1157	1.8
3.	Recpt 3	729	1093	1.8
4.	Recpt 4	778	1179	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) 1	2	3	4	5	6	7	8
1. Recpt 1	314.	3.8	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0
2. Recpt 2	139.	3.8	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
3. Recpt 3	357.	3.9	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1
4. Recpt 4	232.	3.9	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0

RECEPTOR	CONC/LINK (PPM) 9	10	11	12	13	14	15	16
1. Recpt 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2. Recpt 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3. Recpt 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4. Recpt 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RECEPTOR	CONC/LINK (PPM) 17	18	19	20
1. Recpt 1	0.0	0.0	0.0	0.0
2. Recpt 2	0.0	0.0	0.1	0.0
3. Recpt 3	0.0	0.0	0.1	0.0
4. Recpt 4	0.0	0.0	0.1	0.0

1

Run Ended on 7/13/2010 at 16:34:29

1 CALINE4 - (DATED CALINE4x)

3.0.0 PC (32 BIT) VERSION
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Run Began on 7/13/2010 at 16:27:29

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: SR29 NB Ramp-Lakeport Blvd
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	0.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	0.0 CM/S		
CLAS=	6 (F)	VS=	0.0 CM/S		
MIXH=	1000. M	AMB=	3.5 PPM		
SIGTH=	5. DEGREES	TEMP=	15.0 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
1. Link A	6284	-181	6284	-246	AG	388	3.3	0.0	19.1
2. Link B	6284	-246	6284	-300	AG	388	7.4	0.0	19.1
3. Link C	6284	-300	6279	-453	AG	572	3.3	0.0	19.1
4. Link D	6297	-460	6298	-378	AG	769	3.3	0.0	19.1
5. Link E	6298	-378	6298	-319	AG	769	3.3	0.0	19.1
6. Link F	6298	-319	6297	-176	AG	769	3.3	0.0	19.1
7. Link G	6284	-265	6300	-314	AG	0	7.4	0.0	19.1
8. Link H	6300	-314	6462	-325	AG	0	3.3	0.0	23.7
9. Link I	6523	-313	6380	-311	AG	635	3.3	0.0	23.7
10. Link J	6380	-311	6298	-301	AG	451	7.4	0.0	23.7
11. Link K	6370	-310	6284	-326	AG	184	7.4	0.0	23.7

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	6325	-280	1.7
2. Recpt 2	6315	-339	1.7
3. Recpt 3	6243	-327	1.7
4. Recpt 4	6246	-277	1.7

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) 1	2	3	4	5	6	7	8
1. Recpt 1	199.	3.9	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0

2. Recpt 2	*	344.	*	4.0	*	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0
3. Recpt 3	*	83.	*	3.9	*	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
4. Recpt 4	*	105.	*	3.9	*	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

	*CONC/LINK (PPM)		
RECEPTOR	* 9	10	11
1. Recpt 1	* 0.0	0.1	0.0
2. Recpt 2	* 0.0	0.1	0.1
3. Recpt 3	* 0.1	0.1	0.1
4. Recpt 4	* 0.0	0.2	0.0

1

Run Ended on 7/13/2010 at 16:27:29

1 CALINE4 - (DATED CALINE4x)

3.0.0 PC (32 BIT) VERSION
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Run Began on 7/13/2010 at 16:25:31

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: SR29 SB Ramp-Lakeport Blvd
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	0.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	0.0 CM/S		
CLAS=	6 (F)	VS=	0.0 CM/S		
MIXH=	1000. M	AMB=	3.5 PPM		
SIGTH=	5. DEGREES	TEMP=	15.0 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M) X1	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
1. Link A	*	6284	-181	6284	-246	* AG	572	3.3	0.0	17.0
2. Link B	*	6284	-246	6284	-300	* AG	391	7.4	0.0	17.0
3. Link C	*	6284	-300	6279	-453	* AG	391	3.3	0.0	17.0
4. Link D	*	6297	-460	6298	-378	* AG	456	3.3	0.0	17.0
5. Link E	*	6298	-378	6298	-319	* AG	456	3.3	0.0	17.0
6. Link F	*	6298	-319	6297	-176	* AG	456	3.3	0.0	17.0
7. Link G	*	6284	-265	6300	-314	* AG	181	7.4	0.0	17.0
8. Link H	*	6300	-314	6462	-325	* AG	181	3.3	0.0	18.4
9. Link I	*	6523	-313	6380	-311	* AG	0	3.3	0.0	18.4
10. Link J	*	6380	-311	6298	-301	* AG	0	7.4	0.0	18.4
11. Link K	*	6370	-310	6284	-326	* AG	0	7.4	0.0	18.4

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. Recpt 1	*	6325	-280	1.7
2. Recpt 2	*	6315	-339	1.7
3. Recpt 3	*	6243	-327	1.7
4. Recpt 4	*	6246	-277	1.7

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	* BRG (DEG)	* PRED CONC (PPM)	* CONC/LINK (PPM) 1	2	3	4	5	6	7	8
1. Recpt 1	* 253.	* 3.7	* 0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

2. Recpt 2	*	338.	*	3.9	*	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0
3. Recpt 3	*	40.	*	3.7	*	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
4. Recpt 4	*	108.	*	3.7	*	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0

	*CONC/LINK			
	*(PPM)			
RECEPTOR	*	9	10	11
1. Recpt 1	*	0.0	0.0	0.0
2. Recpt 2	*	0.0	0.0	0.0
3. Recpt 3	*	0.0	0.0	0.0
4. Recpt 4	*	0.0	0.0	0.0

1

Run Ended on 7/13/2010 at 16:25:31

Appendix C
Biological Resources Documentation

Biological Study Report

Lake County Courthouse
675 Lakeport Boulevard, Lakeport, CA

Prepared for:

RBF Consulting
500-01

July 15, 2010

Prepared by:

ENPLAN
Environmental Scientists and Planners
www.enplan.com

TABLE OF CONTENTS

1. INTRODUCTION

The purpose of this biological study report is to identify and characterize sensitive natural communities and plant and wildlife resources that are known or expected to occur on a ±5.8-acre project site at 675 Lakeport Boulevard, in the City of Lakeport, Lake County. The site, identified as Lake County Assessor's Parcel Number 025-521-410, is being evaluated for potential construction of a new courthouse. As shown in Figure 1 of Appendix A, the site is located in near the center of Section 25, Township 14 North, Range 10 West, of the U.S. Geological Survey's Lakeport 7.5-minute quadrangle. Photographs of the site are provided in Appendix B.

2. METHODOLOGY AND STAFF QUALIFICATIONS

Prior to conducting fieldwork, a biological records search was completed. This consisted of reviewing the California Department of Fish and Game's California Natural Diversity Data Base (CNDDB) as well as available local records. The CNDDB records search covered a 10-mile radius around the site. This entailed review of records for portions of the following quadrangles: Cow Mountain, Upper Lake, Bartlett Mountain, Purdy's Garden, Lakeport, Lucerne, Clearlake Oaks, Hopland, Highland Springs, Kelseyville, and Clearlake Highlands. Available local records consisted of a biological study report and wetland delineation (Northwest Biosurvey, 2006) prepared for a site approximately 0.3 miles to the north of the subject site on Martin Street, and an Initial Study for the same site (City of Lakeport, 2010). The Martin Street site has physical and biological characteristics similar to the subject site, supports several of the same special-status plant species, and was used as a reference site to check the phenology of local special-status plant species.

Upon completion of the pre-field review, a botanical field survey was undertaken in general accordance with *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (DFG, 2009). Because of the potential requirement for frontage improvements on Lakeport Boulevard, lands between the subject parcel and the street were included in the biological study area. The botanical survey was conducted on April 9 and 29, May 17, and June 19, 2010. All of the special-status plant species potentially occurring in the study area would have been evident at the time the fieldwork was conducted. The survey consisted of an intensive and systematic evaluation of the site; the field survey effort included four to six hours of field time during each of the four site visits.

The locations and approximate population numbers/densities of the identified special-status plant populations were determined by gridding each population into a number of small polygons and then estimating the number of plants in each polygon.

The wildlife evaluation was conducted in three phases. The first phase consisted of the records search described above. Under the second phase, the habitats and special habitat elements in the study area were determined through field reconnaissance. A list of wildlife species that could potentially occur in the identified

habitats was then compiled using the DFG's Wildlife Habitat Relationships (WHR) System, Version 8.2 (DFG, 2008). This is a predictive system based on scientific information regarding wildlife species and their known habitat relationships. It is useful as a general pre-field screen and provides a somewhat broader view of special-status species potentially occurring in the study area.

The wildlife survey was conducted on March 17, 2010. Many of the special-status animal species potentially occurring in the study area would have been evident at the time the fieldwork was conducted. The potential presence of species not readily identifiable during the field surveys was determined on the basis of observed habitat characteristics. The initial field effort included approximately three hours of field observations; additional wildlife observations were made during the botanical field survey visits.

The botanical field surveys were conducted by Donald Burk. Mr. Burk has a Bachelor of Arts degree in Biological Sciences and a Master of Science degree in Botany. He has over 25 years of experience in the design and implementation of botanical field studies. He has previously conducted botanical surveys in Lakeport and is familiar with flora of the region as well as state and federal statutes pertaining to special-status species. The wildlife evaluation was conducted by Darrin Doyle. Mr. Doyle has a Bachelor of Science degree in biology, and has 10 years of experience conducting biological surveys in California. He is familiar with wildlife species of the region and their habitat requirements. Mr. Doyle possesses a federal "take" permit for California red-legged frog and vernal pool crustaceans.

3. RESULTS

Plant Communities/Wildlife Habitats

The study site is situated between approximately 1,340 and 1,400 feet above sea level, and is surrounded on three sides by urban development. The site was historically an oak woodland, and was used for agriculture and grazing beginning in the late 1930s; the site was cleared of trees and shrubs in the early 1970s, and was graded prior to 1988 (URS, 2009). Soils on the site are identified as Henneke-Montara-rock outcrop complex, 15 to 50 percent slopes, with a negligible amount of Still loam, stratified substratum, in the extreme northeast corner of the site (USDA, NRCS, 2009). The Henneke-Montara complex consists of very deep, moderately well-drained soils formed in alluvium from mixed rock types. However, grading activities dramatically altered the soils and natural contours of the site. Roughly 20 feet of surface material was removed from the upper portion of the site, resulting in two level terraces.

Small rocks of serpentine origin are exposed on the upper terrace and hillsides, which support a serpentine herb community. The lower terrace supports a disturbed annual grassland. These two communities are described in more detail below; locations of the communities are shown on Figure 3 of Appendix A and photographs are provided in Appendix B. Two small, shallow seasonal waters with rock substrates are present on the upper terrace. Most runoff from the site enters constructed ditches that convey flow to the east. Flow enters the City's storm drain system, which discharges into Clear Lake approximately ¼-mile east of the site.

Annual grassland

Annual grasslands are characterized by a sparse to dense cover of annual grasses with inclusions of numerous species of native annual forbs ("wildflowers"). Germination occurs with the onset of the fall rains; growth, flowering, and seed-set occur from winter through spring. With a few exceptions, the plants are dead through the summer-fall dry season, persisting as seeds. On the subject site, the annual grassland community is best represented on the lower terrace of the site, on the eastern edge of the study area. Common species in this community include wild oats, soft

chess, California meadow barley, cream sacs, winter vetch, Spanish lotus, and various clovers. Although several special-status plant species were observed on the fringe of the annual grassland community, the community itself is not considered unique or sensitive.

High-quality annual grasslands are inhabited by a variety of wildlife species. Common mammals include black-tailed jackrabbit, coyote, gophers, moles, and several species of mice and voles. Snakes are often abundant in annual grasslands, feeding on small rodents. Amphibians are relatively uncommon in annual grasslands; however, species such as the western toad and Pacific treefrog may be locally abundant near aquatic habitats. Annual grassland also provides nesting and foraging habitat for certain migratory birds, including western meadowlarks, various sparrows, western kingbirds, and horned larks. The WHR data base predicts that this habitat type may be inhabited by 83 species of wildlife (Appendix C). However, because the onsite grassland is a small, fragmented relic of the grassland that historically was interspersed among the oak woodland, far fewer animal species are expected to be present. Overall, the onsite grassland has low value to wildlife species.

Serpentine herb community

The onsite serpentine herb community generally consists of a sparse, low-growing cover of annual and perennial forbs and grasses on the upper terrace and hillsides. Serpentine soils have unique chemical properties that prohibit the growth of many common plant species. A number of other plant species have evolved mechanisms allowing them to survive on serpentine soils. The flora of serpentine sites is thus unique and often supports plants of limited distribution, including a number of endemic species. Plant species observed on the site include naked buckwheat, wicker buckwheat, reflexed fescue, serpentine phacelia, fringed checkerbloom, bearded jewelflower, Douglas's sandwort, and Gambel's dwarf milkvetch. As discussed below, four serpentine-adapted special-status plant species were also observed in this community.

With the exception of crevices between boulders, the serpentine herb community lacks sufficient cover objects for most animal species. Accordingly, this habitat type

supports relatively few species of wildlife. Ground squirrels, which are present in small numbers on the site, create their own shelter by burrowing into hillsides or under large boulders. A number of birds may forage in this habitat; gulls, ravens, and crows were observed overhead, and may feed on picnic remains from the adjacent visitor's center. While the serpentine herb community does not provide tree-nesting habitat for birds, ground-nesting species such as the killdeer could potentially nest on the site. Overall, this habitat type has low value to wildlife species. No estimate on the number of animals that may potentially utilize the serpentine herb community is available, as there is no corresponding WHR habitat type for this community.

Site grading resulted in the creation of two very shallow depressions on the western edge of the serpentine herb community. These depressions pond water to a depth of two to three inches. Because of the underlying bedrock, the water ponds for long duration. These features appear to be subject to U.S. Army Corps of Engineers jurisdiction as non-wetland "waters of the United States." They drain to the northwest and southwest corners of the upper terrace and overflow enters small constructed ditches that ultimately discharge to the City's storm drain system. These waters are essentially unvegetated and provide minimal wildlife value. However, they do attract some species, such as killdeer. A delineation of wetlands and other waters on the subject site has been completed by ENPLAN and is presented in a separate report (ENPLAN, 2010).

The serpentine herb community is considered to be a sensitive natural community due to its somewhat restricted distribution and the high potential for endemic plant species to be present. The onsite community has been highly disturbed by grading. Although this has reduced the value of the site for some plant species, it has formed a "serpentine barren" that supports a unique suite of species, including four special-status species. Loss of the serpentine herb community as a result of project development is considered a significant adverse impact. Mitigation for this loss is best considered in conjunction with impacts on the four special-status plant species, and is addressed below.

Special-Status Plant Species

Review of CNDDB records showed that two special-status plant species, green jewel-flower and mayacamas popcorn-flower, have been broadly mapped to include the study area. Twenty-six other special-status plant species are known to occur within a 10-mile radius: Anthony's Peak lupine, beaked tracyina, bent-flowered fiddleneck, Boggs Lake hedge-hyssop, Bolander's horkelia, Brandegee's eriastrum, bristly sedge, Burke's goldfields, Colusa layia, dimorphic snapdragon, eel-grass pondweed, glandular western flax, Koch's cord moss, Konocti manzanita, Napa bluecurls, Norris' beard moss, oval-leaved viburnum, Raiche's manzanita, Rincon Ridge ceanothus, robust monardella, serpentine cryptantha, small-flowered calycadenia, small groundcone, Sonoma canescent manzanita, two-carpellate western flax, and woolly meadowfoam (Appendix D). The potential for each special-status plant species to utilize the study area is evaluated in Appendix E.

The botanical survey confirmed the presence of four special-status plant species on the project site: Colusa layia, bent-flowered fiddleneck, serpentine cryptantha, and Tracy's clarkia (a special-status species not reported in the CNDDB records search). The locations of the plant populations are shown in Figure 3 of Appendix A. A checklist of vascular plant species observed during the botanical field surveys is provided in Appendix F. Data forms documenting the special-status plant occurrences have been submitted to the California Natural Diversity Data Base.

Colusa layia *(Layia septentrionalis)*

Colusa layia is an annual herb that occurs in oak woodlands, chaparral, valley and foothill grasslands, and in sandy serpentinite. The species is not state or federally listed, but is on CNPS List 1B.2 (Plants Rare, Threatened, or Endangered in California and Elsewhere; Fairly Threatened in California). The species occurs between 300 and 3,600 feet in elevation. A total of 44 populations are reported in CNDDB records. These populations occur in the North Coast Range and Sutter Buttes (Colusa, Glenn, Lake, Mendocino, Napa, Sonoma, Sutter, Tehama, and Yolo counties). Reported population sizes (available for only about 25 percent of the records) range mostly from 100 to 200 plants, with the largest reported population having about 2,000 plants. With

roughly 20,000 to 25,000 plants observed on the subject site, the onsite Colusa layia population is by far the largest of those for which data is available. On the subject site, the species is most abundant on hillsides within the serpentine herb community, with a small number of plants present on the upper and lower terraces.

Bent-flowered fiddleneck (*Amsinckia lunaris*)

Bent-flowered fiddleneck occurs in cismontane woodlands, and valley and foothill grassland. The species is not state or federally listed, but is on CNPS List 1B.2 (Plants Rare, Threatened, or Endangered in California and Elsewhere; Fairly Threatened in California). The species is reported between 50 and 1,500 feet in elevation. A total of 50 populations are reported in CNDDB records. Populations are known to occur in Lake, Marin, Napa, Colusa, Contra Costa, Alameda, San Benito, Santa Clara, Santa Cruz, Yolo, and San Mateo counties. Reported population sizes (available for only about 35 percent of the records) range mostly from 10 to 300 plants. The largest quantified population size estimate is 3,650 plants, although the plants are noted to be "common" at other sites. Approximately 500 bent-flowered fiddleneck plants were observed on the subject site, primarily growing on hillsides within the serpentine herb community.

Serpentine cryptantha (*Cryptantha clevelandii* ssp. *dissita*)

Serpentine cryptantha generally occurs on serpentine rock outcrops in chaparral communities. The species is reported between 1,100 and 2,400 feet in elevation. The species is not state or federally listed, but is on CNPS List 1B.1 (Plants Rare, Threatened, or Endangered in California and Elsewhere; Seriously Threatened in California). A total of 10 populations are reported in CNDDB records. Populations are known to occur in Lake, Mendocino, Napa, and Sonoma counties. Six of the ten populations were observed between 1902 and 1967, the remaining four populations were observed between 1999 and 2003. No population size data is available. Approximately 10,000 serpentine cryptantha plants were observed on the subject site. Most of the plants occur within the serpentine herb community, on the upper terrace and on the hillside just below the upper terrace.

Tracy's clarkia (*Clarkia gracilis* ssp. *tracyi*)

Tracy's clarkia generally occurs on serpentine soils in chaparral communities. The species is reported from 200 to 2,200 feet above sea level. The species is not state or federally listed, but is on CNPS List 4.2 (Plants of Limited Distribution (A Watch List); Fairly Threatened in California). Populations are known to occur in Colusa, Humboldt, Lake, Mendocino, Napa, Trinity, and Tehama counties. Because of the lower CNPS status, the CNDDB does not offer online data regarding the number of recorded populations or population sizes. Nearly 10,000 Tracy's clarkia plants were observed on the site. All of these plants were growing on the periphery of the site, on both undisturbed and highly disturbed soils.

As noted above, Colusa layia, serpentine cryptantha, and bent-flowered fiddleneck are on the California Native Plant Society's List 1B. Although not state or federally listed, plants with this CNPS listing status are generally considered to qualify as "endangered, rare, or threatened" under Section 15380(d) of the California Environmental Quality Act (CEQA) Guidelines and thus require consideration during CEQA review. Tracy's clarkia is on CNPS List 4; plants of this status rarely qualify for state listing, but may be locally significant. As such, potential impacts to this species should also be evaluated during the CEQA process.

Because detailed site development plans have not yet been prepared, the extent of impacts to the serpentine herb community and the four onsite special-status plant species cannot be quantified. However, in general terms, site development has a high potential to adversely affect these resources. It appears that Tracy's clarkia, which is the least sensitive of the plants, would be least affected because it primarily occurs on the periphery of the site. Serpentine cryptantha, which is the most sensitive of the four species on the site, is the most centrally located and would be the most difficult to avoid during site development. Because all four of the special-status plant species have an affinity for serpentine soils, mitigation for the loss of the plants would also provide at least some mitigation for the loss of the serpentine herb community.

Department of Fish and Game staff were contacted following discovery of the special-status plant populations. However, the DFG has not conducted a field review of

the site or provided guidance as to potential mitigation strategies. Because full avoidance of the special-status plant populations and serpentine herb community does not appear to be possible, we recommend that the project proponent prepare a mitigation plan acceptable to DFG prior to project construction. Mitigation would likely include avoidance of at least some of the onsite serpentine herb community and associated special-status plant populations. Detailed mapping of the extent and densities of the special-status plant communities prepared as part of the botanical study (Figure 3 of Appendix A) will assist in preparing a site design that minimizes impacts to the populations. We recommend that the mitigation plan be prepared as early as possible, in conjunction with preparation of site design and development plans. Other options for mitigation include preservation of other local populations of these special-status plants, restoration of degraded populations on other sites in the area, and/or creation or new populations.

Special-Status Animal Species

Review of CNDDB records showed that one special-status animal species, American badger, has been broadly mapped as occurring within the study area. In addition, eight other special-status animal species are known to occur within a 10-mile radius: Clear Lake hitch, foothill yellow-legged frog, grasshopper sparrow, Pacific fisher, Sacramento perch, Townsend's big-eared bat, tricolored blackbird, and western pond turtle (Appendix D). The CNDDB records search also identified seven non-status animal species within the search radius: *Calasellus californicus*, Bell's sage sparrow, blennosperma vernal pool andrenid bee, double-crested cormorant, great blue heron, osprey, and silver-haired bat.

The potential for each special-status animal species to utilize the study area is evaluated in Appendix E. No special-status animal species were observed in the study area during the wildlife evaluation. However, as documented in Appendix E, two special-status animal species, grasshopper sparrow and Townsend's big-eared bat, as well as the non-status silver-haired bat could potentially utilize the site as some point during their life cycles. A checklist of wildlife species observed at the site is presented in Appendix G.

The grasshopper sparrow, a migratory bird, has a low potential to nest in the onsite annual grassland community. Potential adverse effects on nesting grasshopper sparrows can be avoided through proper timing of vegetation removal (see Nesting Migratory Birds below).

Townsend's big-eared bat and silver-haired bat could potentially forage on the site. However, they are very unlikely to roost on the site, given the lack of suitable roosting sites. Because suitable roosting habitat is much more available on other local sites and similar or higher quality foraging habitat is widely available, site development would have a negligible effect on these bat species; no mitigation is warranted.

Nesting Migratory Birds

Although no bird nests were observed in the study area during the field inspections, it is possible that migratory birds, particularly ground-nesting species, could nest on the study area in future years. The federal Migratory Bird Treaty Act requires that nesting migratory birds not be adversely affected by human activities. To ensure compliance with the Act, vegetation should be removed from the project area outside of the nesting season. In the local area, most birds nest between March 1 and July 31. Accordingly, the potential for adversely affecting nesting birds can be greatly minimized by removing vegetation before March 1 or after July 31. If this is not possible, a nesting survey should be conducted within two weeks prior to vegetation removal. If active nests are present, work within 500 feet of the nest(s) should be postponed until the young have fledged, unless a smaller nest buffer zone is authorized by the DFG.

Resource-Agency Permit Requirements

If the Corps of Engineers confirms that the small depressions and constructed ditches are waters subject to federal jurisdiction, a Department of the Army permit would be required prior to fill of the features. As a condition of the Department of the Army permit, issuance of a Water Quality Certification by the Regional Water Quality Control Board would also be required. It is unlikely that a Streambed or Lakebed Alteration Agreement would be required by the Department of Fish and Game; however, we recommend this be confirmed through consultation with Department staff. As for any

project involving more than one acre of surface disturbance, a General Construction Activity Storm Water Permit must be obtained from the State Water Resources Control Board; this requires preparation and implementation of a Storm Water Pollution Prevention Plan. Project implementation would also necessitate obtaining other permits (e.g., encroachment permits, air quality permits), but these involve issues beyond the scope of this document.

4. CONCLUSIONS AND RECOMENDATIONS

In summary, we find that the study area supports non-wetland "waters of the United States," a unique serpentine herb community, and four special-status plant species: Colusa layia, serpentine cryptantha, bent-flowered fiddleneck, and Tracy's clarkia. In addition, two special-status animal species (grasshopper sparrow and Townsend's big-eared bat), the non-status silver-haired bat, and nesting migratory birds could potentially utilize the site at some point during their life cycle.

Mitigation is not warranted for the bat species because they are unlikely to roost on the site and foraging habitat is widely available. Mitigation is not warranted for Tracy's clarkia given its relative abundance and low listing status; however, mitigation for the serpentine herb community and other three special-status plants is expected to offset the loss of Tracy's clarkia. Implementation of the following measures would reduce the remaining biological impacts to a level below that of significance.

1. Obtain Required Resource-Agency Permits. The project proponent shall obtain all necessary resource-agency permits prior to initiating any grading or construction activities within "waters of the United States." The required permits may include a Department of the Army Nationwide Permit from the U.S. Army Corps of Engineers, Water Quality Certification from the Regional Water Quality Control Board, and possibly a Streambed Alteration Agreement from the California Department of Fish and Game.
2. Avoid/Minimize/Offset the Loss of the Serpentine Herb Community and Associated Special-Status Plants. The project proponent shall prepare a mitigation plan identifying specific impacts of the proposed courthouse project on the serpentine herb community, Colusa layia, serpentine cryptantha, and bent-flowered fiddleneck. The plan shall include measures to avoid and minimize impacts to these resources through careful site design and establishment of onsite avoidance areas. To the extent feasible, Tracy's clarkia shall also be avoided/protected. If avoidance is not possible or does not provide sufficient mitigation, other mitigation measures shall be designated in the plan, including preservation of offsite serpentine habitats and special-status plant populations, restoration of degraded habitats on other local sites capable of supporting the sensitive resources, and/or creation of new habitats capable of supporting the sensitive resources. The mitigation plan shall be submitted to the California Department of Fish and Game for review, and must be approved in writing by DFG prior to initiation of site construction activities.

3. Avoid Disturbance of Nesting Migratory Birds, Including Grasshopper Sparrow. If feasible, vegetation removal shall be conducted between August 1 and February 28. If vegetation removal must be conducted between March 1 and July 31, a nesting bird survey shall be conducted within two weeks prior to initiation of work; if active nests are present, work within 500 feet of the nest(s) shall be postponed until the young have fledged, unless a smaller nest buffer zone is authorized by the DFG.

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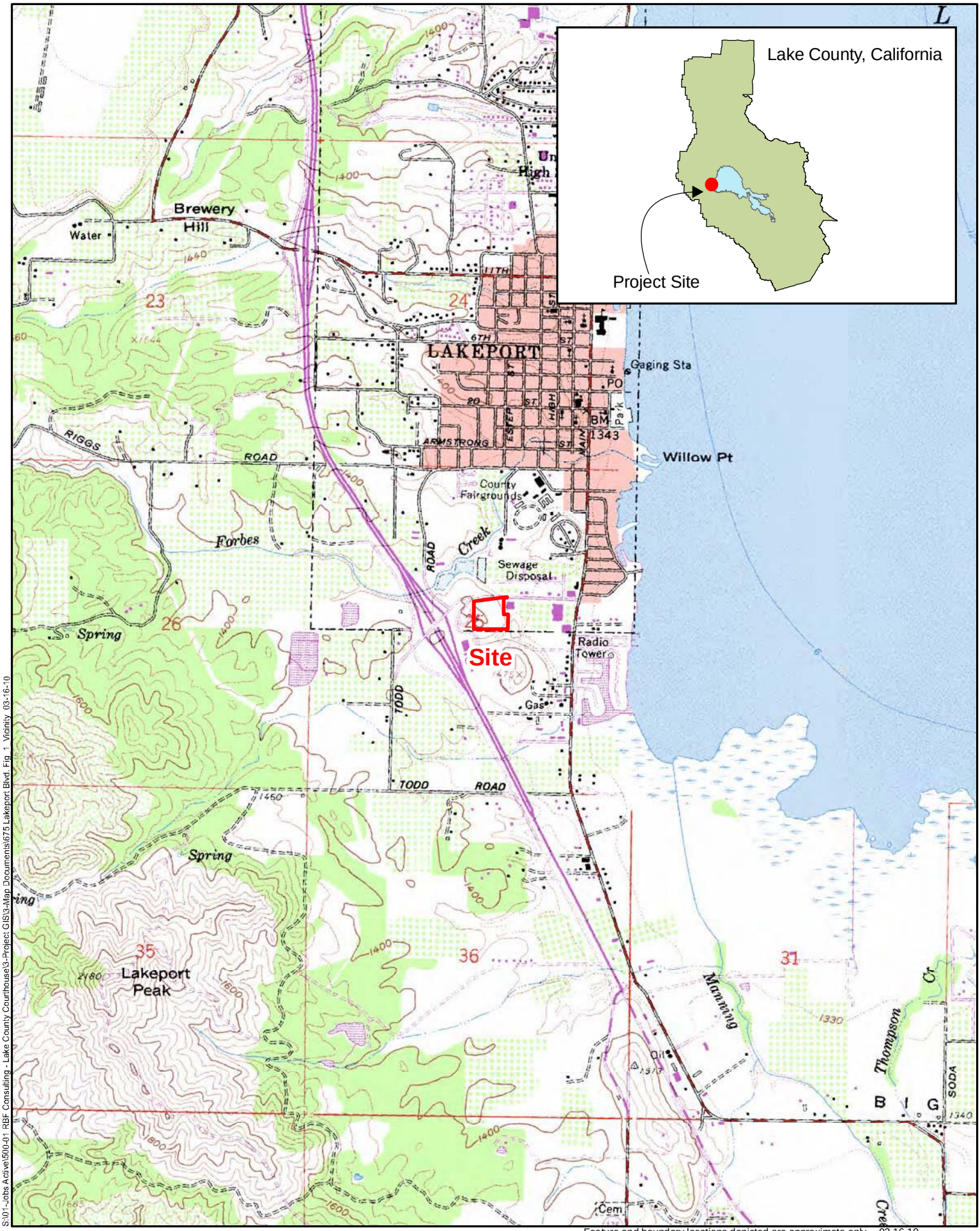
Appendix A

Figures



S:\01-Jobs Active\500-01 RBF Consulting - Lake County Courthouse\3-Project GIS\3-Map Documents\675 Lakeport Blvd_Fig 1_Vicinity_03-16-10

Feature and boundary locations depicted are approximate only. 03.16.10

0 2,000 Feet

Figure 1

Project Vicinity Map

ENPLAN

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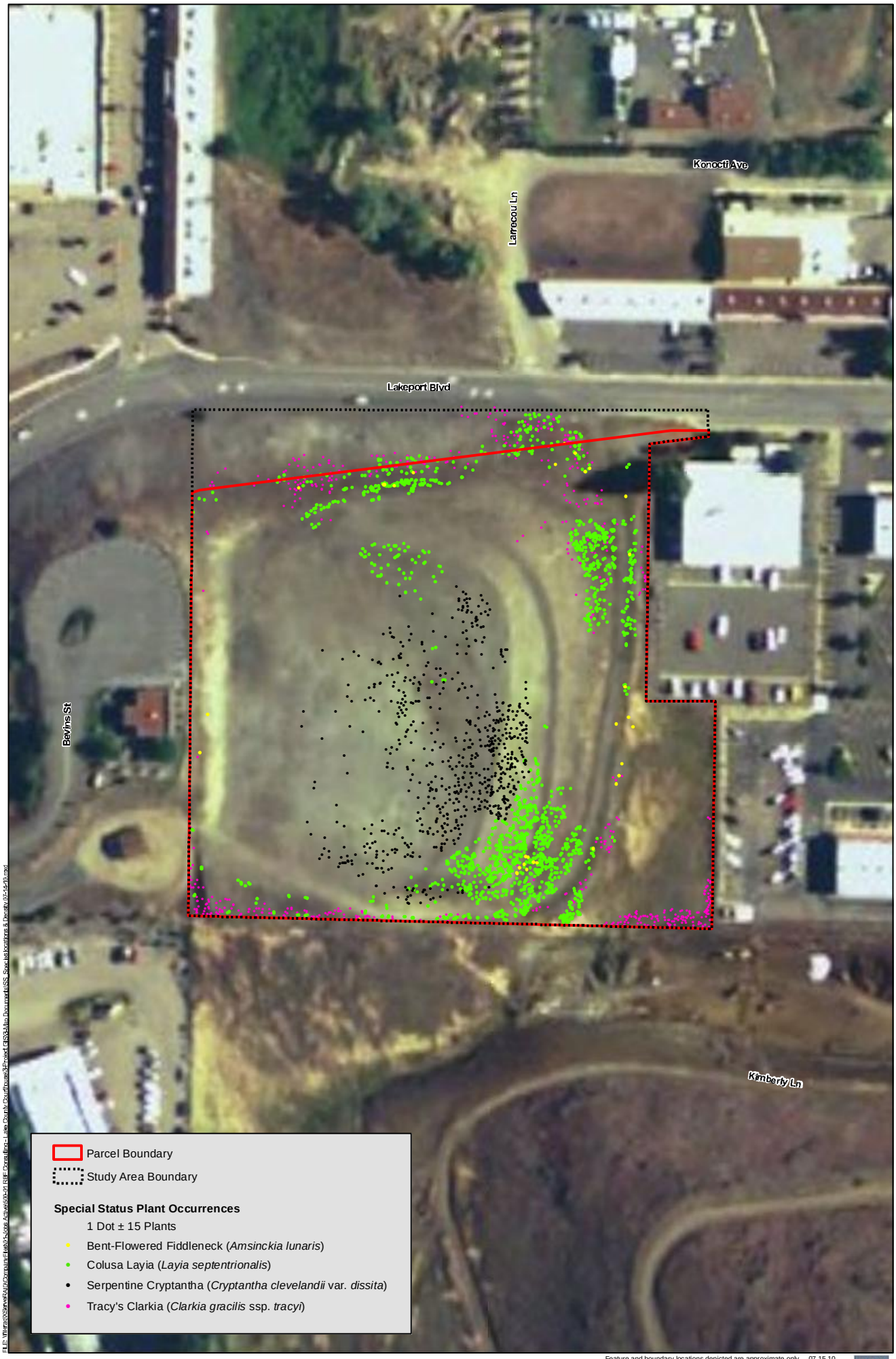
Feature and boundary locations depicted are approximate only. 07.12.10

0 Feet 300

Figure 2

Project APE and Area Surveyed

ENPLAN



Feature and boundary locations depicted are approximate only. 07.15.10

0 70 Feet

Figure 3

Special-Status Plant Population Locations and Density Representation

ENPLAN

Appendix B

Site Photographs

Site Photographs

Annual Grassland (front) and Serpentine Herb (back) Communities 3/17/10

Annual Grassland Community 6/17/10

Serpentine Herb Community on Upper Terrace 3/17/10

Serpentine Herb Community on Undisturbed Slope 6/17/10

Ponded Water on Upper Terrace 2/8/10

Constructed Drainage Ditch 4/29/10

Bent-flowered Fiddleneck 4/9/10

Colusa Layia 5/19/10

Serpentine Cryptantha 6/17/10

Serpentine Cryptantha on Hillside 6/17/10

Tracy's Clarkia 6/17/10

Tracy's Clarkia Habitat 6/17/10

Appendix C

Wildlife Habitat Relationships Report Summary

WHR SPECIES SUMMARY REPORT (VERSION 8.2)
Lake County Courthouse
675 Lakeport Boulevard, Lakeport, CA

ID	SPECIES NAME	STATUS												
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
A007	California newt							7							
A043	Foothill yellow-legged frog							7				11	12		
A046	Bullfrog														14
A071	California red-legged frog		2					7							
R004	Western pond turtle							7				11	12		
R036	Western skink							7				11			
R048	Ringneck snake												12		
R057	Gopher snake							7							
R059	California mountain kingsnake							7					12		
R061	Common garter snake	1		3		5		7							
B051	Great blue heron													13	
B052	Great egret													13	
B071	Snow goose														14
B075	Canada goose														14
B077	Green-winged teal														14
B079	Mallard														14
B080	Northern pintail														14
B083	Cinnamon teal														14
B084	Northern shoverler														14
B085	Gadwall														14
B086	Eurasian wigeon														14
B087	American widgeon														14
B094	Lesser scaup														14
B110	Osprey													13	
B111	White-tailed kite					5									
B113	Bald eagle			3		5								13	
B114	Northern harrier							7							
B124	Ferruginous hawk											11			
B126	Golden eagle					5						11		13	
B129	Peregrine falcon			3		5							12	13	
B133	Ring-necked pheasant														14
B134	Sooty grouse							7							14
B138	Wild turkey														14
B140	California quail							7							14
B141	Mountain quail														14
B149	American coot														14
B255	Mourning dove														14
B269	Burrowing owl							7				11			
B272	Long-eared owl							7							
B273	Short-eared owl							7							
B338	Purple martin							7							
B342	Bank swallow				4										
B353	American crow														14
B410	Loggerhead shrike	1						7							
B461	Common yellowthroat							7							
B487	Rufous-crowned sparrow							7							
B499	Savannah sparrow			3				7							
B501	Grasshopper sparrow							7							
B505	Song sparrow							7							

ID	SPECIES NAME	STATUS												
B519	Red-winged blackbird						7							
B520	Tricolored blackbird						7							
B522	Yellow-headed blackbird						7							
M001	Virginia opossum													14
M006	Ornate shrew	1					7							
M018	Broad-footed mole						7							
M023	Yuma myotis										11			
M026	Fringed myotis										11			
M033	Western red bat						7					12		
M037	Townsend's big-eared bat						7				11	12		
M038	Pallid bat						7				11	12		
M045	Brush rabbit	1		3										14
M047	Desert cottontail													14
M051	Black-tailed jackrabbit						7							14
M087	San Joaquin pocket mouse						7				11			
M105	California kangaroo rat						7				11			
M112	American beaver													14
M117	Deer mouse						7							
M134	California vole	1		3			7				11			
M146	Coyote													14
M147	Red fox				4							12		14
M149	Gray fox													14
M151	Black bear													14
M152	Ringtail					5								
M153	Raccoon													14
M157	Long-tailed weasel													14
M160	American badger						7							14
M161	Western spotted skunk						7							14
M162	Striped skunk													14
M165	Mountain lion						7							
M166	Bobcat													14
M176	Wild pig													14
M177	Elk													14
M181	Mule deer													14

Total Number of Species: 83

Habitats Selected:

Annual grassland

STATUS KEY:

1 = Federal Endangered
2 = Federal Threatened
3 = California Endangered
4 = Caifornia Threatened
5 = Caifornia Fully Protected
6 = California Protected
7 = California Species of Special Concern
8 = Federally - Proposed Endangered
9 = Federally - Proposed Threatened
10 = Federal Candidate
11 = BLM Sensitive
12 = USFS Sensitive
13 = CDF Sensitive
14 = Harvest

Appendix D

Rarefind (CNDDB) Report Summary

Rarefind (CNDDB) Report Summary (March 2010 Data)
Lake County Courthouse
675 Lakeport Boulevard, Lakeport, CA

Listed Element	Quadrangle[1]											Status[2]
	CM	UL	BM	PG	LA	LU	CO	HO	HS	KE	CH	
Animals												
American badger					●							SSC
Calasellus californicus										●		None
Bell's sage sparrow									●			None
Blennosperma vernal pool andrenid bee					●							None
Clear Lake hitch		●			●	●	●		●		●	SSC
Double-crested cormorant					●							None
Foothill yellow-legged frog				●					●	●		SSC
Grasshopper sparrow				●				●				SSC
Great blue heron					●							None
Osprey			●	●	●	●	●			●		None
Pacific fisher				●								FC, SSC
Sacramento perch					●	●	●				●	SSC
Silver-haired bat			●			●						None
Townsend's big-eared bat				●								SSC
Tricolored blackbird		●			●							SSC
Western pond turtle		●						●	●	●		SSC
Plants												
Anthony's Peak lupine			●									1B.3
Beaked tracyina				●	●			●				1B.2
Bent-flowered fiddleneck					●	●			●			1B.2
Boggs Lake hedge-hyssop										●		SE, 1B.2
Bolander's horkelia				●					●			1B.2
Brandegee's eriastrum										●		1B.2
Bristly sedge	●							●				2.1
Burke's goldfields										●		FE, SE, 1B.1
Colusa layia					●	●	●	●	●	●		1B.2
Dimorphic snapdragon									●			4.3
Eel-grass pondweed						●	●			●	●	2.2
Glandular western flax			●		●	●			●	●		1B.2
Green jewel-flower					●							1B.2
Koch's cord moss				●				●				1B.3
Konocti manzanita						●			●	●		1B.3
Mayacamas popcorn-flower					●							1A
Napa bluecurls										●		1B.2
Norris' beard moss			●		●	●			●			2.2
Oval-leaved viburnum								●				2.3
Raiche's manzanita				●								1B.1
Rincon Ridge ceanothus				●								1B.1
Robust monardella										●		1B.2
Serpentine cryptantha					●				●			1B.1
Small-flowered calycadenia									●			1B.2
Small groundcone				●				●				2.3
Sonoma canescent				●								1B.2

Rarefind (CNDDB) Report Summary (March 2010 Data)
Lake County Courthouse
675 Lakeport Boulevard, Lakeport, CA

Listed Element	Quadrangle[1]											Status[2]
	CM	UL	BM	PG	LA	LU	CO	HO	HS	KE	CH	
manzanita												
Two-carpellate western flax			●			●						1B.2
Woolly meadowfoam										●		4.2
Natural Communities												
Clear Lake Drainage Cyprinid /Catostomid Stream						●				●		None
Clear Lake Drainage Resident Trout Stream										●		None
Clear Lake Drainage Seasonal Lakefish Spawning Stream						●				●		None
Coastal and Valley Freshwater Marsh		●			●	●						None
Northern Interior Cypress Forest				●								None
Serpentine Bunchgrass				●								None

Highlighting denotes the quadrangle in which the project site is located.

[1]Quadrangle Code

CM = Cow Mountain
UL = Upper Lake
BM = Bartlet Mtn.
PG = Purdy's Garden
LA = Lakeport
LU = Lucerne
CO = Clearlake Oaks
HO = Hopland
HS = Highland Springs
KE = Kelseville
CH = Clearlake Highlands

[2]Status Codes

Federal/State

FE = Federally Listed – Endangered
FT = Federally Listed – Threatened
FC = Federal Candidate Species
FD = Federally Delisted
SE = State Listed – Endangered
ST = State Listed – Threatened
SSC = State Species of Concern

California Native Plant Society

List 1A = Plants Presumed Extinct in California
List 1B = Plants Rare, Threatened or Endangered in California and Elsewhere
List 2 = Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
List 3 = Plants About Which We Need More Information – A Review List
List 4 = Plants of Limited Distribution – A Watch List

Threat Ranks

0.1 = Seriously Threatened in California
0.2 = Fairly Threatened in California
0.3 = Not Very Threatened in California

Appendix E

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur at the Project Site

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Wildlife		
American badger *Taxidea taxus*	Badgers are most commonly found in dry, open areas in shrub, forest, and herbaceous habitats, with friable soils. Badgers dig burrows in dry, sandy soil, usually in areas with sparse overstory.	Review of CNDDB records found that the American badger has been broadly mapped to include the project site. The exact location of this occurrence is uncertain, but has been mapped to include most of the community of Lakeport. Field inspection found no badgers or badger dens. The American badger is thus not expected to be present or affected by project implementation.
Calasellus californicus	*Calasellus californicus,* a freshwater isopod, is found in association with springs and seeps. The species is known to occur in Lake, Santa Clara, and Napa counties.	Springs and seeps do not occur on the project site. *Calasellus californicus* would thus not be present or affected by project implementation.
Bell's sage sparrow *Amphispiza belli belli*	Bell's sage sparrow nest in chaparral dominated by dense stands of chamise.	The project area does not support chaparral or dense stands of chamise. Bell's sage sparrow would thus not be present.
Blennosperma vernal pool andrenid bee *Andrena blennospermatis*	The blennosperma vernal pool andrenid bee is a solitary, ground-nesting bee that inhabits upland areas around vernal pools. This bee has a patchy distribution in California's Sacramento Valley and foothills.	Vernal pools do not occur on or adjacent to the project site. The blennosperma vernal pool andrendid bee would thus not be present or affected by project implementation.
Clear Lake hitch *Lavinia exilicauda chi*	Clear Lake hitch are endemic to Clear Lake (Lake County) and its associated tributaries. Hitch are also found in nearby Thurston Lake and Lampson Pond. Adults spawn in seasonal tributary streams to Clear Lake, such as Kelsey, Seigler Canyon, Adobe, Middle, Scotts, Cole, and Manning creeks. Spawning occurs in gravelly areas in the lower reaches of these streams.	The project area lacks lakes and streams. Clear Lake hitch would thus not be present or affected by project implementation.
Double-crested cormorant *Phalacrocorax auritis*	Double-crested cormorant is a year-long resident along the coast and inland lakes and rivers, and feeds primarily on fish. Double-crested cormorants are colonial nesters, and nest from April through August. Nesting/roosting habitat includes off-shore rocks, islands, cliffs, wharfs, jetties, or overhanging tree branches along lakes and rivers.	The project area lacks suitable nesting and foraging habitat for the double-crested cormorant. The double-crested cormorant would thus not be present or affected by project implementation.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Foothill yellow-legged frog *Rana boylii*	Foothill yellow-legged frogs are typically found in partly-shaded, shallow streams and riffles with a rocky substrate in a variety of aquatic habitats. This frog needs at least some cobble-sized substrate for egg-laying. Foothill yellow-legged frogs generally prefer low to moderate gradient streams, especially for breeding and egg-laying, although juvenile and adult frogs may utilize moderate- to steep-gradient streams during summer and early fall.	The project area lacks suitable habitat for the foothill yellow-legged frog. The foothill yellow-legged frog was not observed during the wildlife survey and is not expected to be present or affected by project implementation.
Grasshopper sparrow *Ammodramus savannarum*	Grasshopper sparrows frequent dry or well-drained native grasslands. Nesting occurs from early April through mid-July in these grasslands. Nests are constructed of grasses or forbs in slight depressions on the ground, usually at the base of an overhanging clump of grass or forbs.	Although not observed during the wildlife survey, the grassland on the project site has a low potential to provide nesting habitat for the grasshopper sparrow.
Great blue heron *Ardea herodias*	Great blue herons nest in colonies along marshes, lake margins, tideflats, wet meadows, rivers, and streams. Nests are generally in the tops of tall trees and snags. Uncommon nest sites include rock ledges, sea cliffs, and tule mats.	The project site lacks suitable nesting habitat for the great blue heron. Great blue herons were not observed during the wildlife survey and are not expected to nest on the site.
Osprey *Pandion haliaetus*	Ospreys require large bodies of permanent water and suitable nest sites. Nesting occurs on large decadent trees or structures such as powerline towers, buildings, and bridges. Ospreys are primarily associated with pine and mixed-conifer habitats, although urban or suburban nests are not unusual.	The project site lacks suitable nesting habitat for the osprey. Ospreys were not observed during the wildlife survey and are not expected to nest on the site. Review of CNDDB records found that the nearest reported osprey nest is approximately ¼-mile southeast of the project site, along the shore of Clear Lake.
Pacific fisher *Martes pennanti pacificus*	Pacific fishers primarily inhabit mixed conifer forests dominated by Douglas-fir, although they also are encountered frequently in higher elevation fir and pine forests, and mixed evergreen/broadleaf forests. Suitable habitat for Pacific fishers consists of large areas of mature, dense forest stands with snags and greater than 50 percent canopy closure.	No forest habitat occurs on the project site. Field inspection found no fishers or fisher dens on the site. The Pacific fisher would thus not den on the site or be affected by project implementation.
Sacramento perch *Archoplites interruptus*	The Sacramento perch is a warm-water fish that historically occurred in Clear Lake (Lake County), as well as the Sacramento, San Joaquin, Pajaro, and Salinas river systems. The species is presently restricted to Clear Lake and several small reservoirs and farm ponds where they have been introduced. Adults and juveniles associate with beds of aquatic vegetation in shallow water.	Lakes and streams do not occur on the project site. The Sacramento perch would thus not be present or affected by project implementation.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Silver-haired bat *Lasionycteris noctivagans*	Silver-haired bats occur in coastal and montane forests. Silver-haired bats roost in hollow trees, snags, rock crevices, caves, and under bark.	The project site provides suitable foraging habitat for the silver-haired bat, but does not provide roosting habitat.
Townsend's big-eared bat *Corynorhinus townsendii pallescens*	Townsend's big-eared bat is found throughout California except in subalpine and alpine habitats, and may be found at any season throughout its range. The species is most abundant in mesic habitats. The bat requires caves, mines, tunnels, buildings, or other human-made structures for roosting.	The project site provides suitable foraging habitat for Townsend's big-eared bat, but does not provide roosting habitat.
Tricolored blackbird *Agelaius tricolor*	Tricolored blackbirds require open water, usually nesting in dense cattails or tules although they can also nest in thickets of willow, blackberry, wild rose and tall herbs. Tricolored blackbirds are colonial nesters. Nesting areas must be large enough to support a minimum colony of about 50 pairs.	The project site lacks suitable nesting habitat for the tricolored blackbird. Tricolored blackbirds were not observed during the wildlife survey and are not expected to nest on the site.
Western pond turtle *Actinemys marmorata*	The western pond turtle associates with permanent or nearly permanent water in a variety of habitats. This turtle is typically found in quiet water environments. Pond turtles require basking sites such as partially submerged logs, rocks, or open mud banks, and suitable (sandy banks or grassy open fields) upland habitat for egg-laying. In cold weather, pond turtles hibernate underwater in bottom mud.	The project site lacks suitable habitat for the western pond turtle. The western pond turtle was not observed during the wildlife survey and is not expected to be present or affected by project implementation.
PLANTS		
Anthony's Peak lupine *Lupinus antoninus*	Anthony's Peak lupine occurs on rocky outcrops and dry talus and shaley slopes on mountaintops above timberline (4,000 to 7,500 feet above sea level). The species is known to occur in Mendocino, Trinity, and Lake counties. The flowering period is May through July.	The project site is well below the elevational range of Anthony's Peak lupine. The species was not observed during the botanical survey and is not expected to be present or affected by project implementation.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Beaked tracyina *Tracyina rostrata*	Beaked tracyina is an annual herb that usually occurs on dry, grassy slopes in coastal prairie. The species is reported between 400 and 1,000 feet in elevation. Most populations are reported in Humboldt and Mendocino counties, although several populations are found in Lake and Sonoma counties. The flowering period is May through June.	The disturbed grassland on the project site has a low potential to support beaked tracyina. However, beaked tracyina was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Bent-flowered fiddleneck *Amsinckia lunaris*	Bent-flowered fiddleneck occurs in cismontane woodland, and valley and foothill grassland. The species is reported between 50 and 1,500 feet in elevation. Populations are known to occur in Lake, Marin, Napa, Colusa, Contra Costa, Alameda, San Benito, Santa Clara, Santa Cruz, Yolo, and San Mateo counties. The flowering period is March through June.	The project site provides suitable habitat for bent-flowered fiddleneck, and the species was observed during the botanical survey.
Boggs Lake hedge-hyssop *Gratiola heterosepala*	Boggs Lake hedge-hyssop occurs in marshes, swamps, and vernal pools. The species is reported from sea level to 7,800 feet in elevation. The flowering period is April through August.	The project site lacks marshes, swamps, and vernal pools. Boggs Lake hedge-hyssop was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Bolander's horkelia *Horkelia bolanderi*	Bolander's horkelia occurs along grassy margins of vernal pools. The species is reported between 1,500 and 3,000 feet in elevation. Populations are known to occur in Colusa, Lake, and Mendocino counties. The flowering period is June through August.	Vernal pools do not occur on the project site. Bolander's horkelia was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Brandegee's eriastrum *Eriastrum brandegeae*	Brandegee's eriastrum occurs on dry gravelly to loamy soils on flats and benches in chaparral or closed-cone pine forests. The species is reported between 1,000 and 3,400 feet in elevation in the northern Coast Range. Populations are known to occur in Colusa, Glenn, Lake, Shasta (extreme southwestern portion), Trinity, Santa Clara, and San Mateo counties. The flowering period is April through August.	Chaparral or closed-cone pine forests do not occur on the project site. Brandegee's eriastrum was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Bristly sedge *Carex comosa*	Bristly sedge occurs in marshes, and swamps, or along lake margins. This species is reported from sea level to 2,100 feet in elevation. The flowering period is May through September.	Marshes, swamps, or lake margins do not occur on the project site. Bristly sedge was not observed during the botanical survey and is not expected to be present or affected by project implementation.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Burke's goldfields *Lasthenia burkei*	Burke's goldfields occurs in vernal pools, meadows, and seeps. The species is reported between 50 and 2,000 feet in elevation. Populations are known to occur in Lake, Mendocino, Napa, and Sonoma counties. The flowering period is April through June.	Vernal pools, meadows, and seeps do not occur on the project site. Burke's goldfields was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Colusa layia *Layia septentrionalis*	Colusa layia is an annual herb that occurs in oak woodland, chaparral, valley and foothill grasslands, and in sandy serpentinite. The species is reported between 300 and 3,600 feet in elevation. Populations are known to occur in the Coast Range and Sutter Buttes (Colusa, Glenn, Lake, Mendocino, Napa, Sonoma, Sutter, Tehama, and Yolo counties). The flowering period is April through May.	The project site provides suitable habitat for Colusa layia, and the species was observed on the northern portion of the upper terrace and on the slope below the terrace.
Dimorphic snapdragon *Antirrhinum subcordatum*	Dimorphic snapdragon occurs on serpentine or shale soils in foothill woodland or chaparral on south or west-facing slopes, between 600 and 2,500 feet above sea level. The flowering period is April through July.	Serpentine rocks cover most of the project site. However, dimorphic snapdragon was not observed during the botanical survey and is not expected to be present.
Eel grass pondweed *Potamogeton zosteriformis*	Eel grass pondweed occurs in ponds, lakes, streams, marshes, and swamps up to 6,000 feet in elevation. This aquatic plant has been reported in Lassen, Shasta, Modoc, Contra Costa, and Lake counties.	Suitable habitat for eel grass pondweed does not occur on the project site. Eel grass pondweed was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Glandular western flax *Hesperolinon adenophyllum*	Glandular western flax generally occurs on serpentine soils in chaparral. The species is reported between 1,400 and 4,300 feet in elevation. Populations are known to occur in Lake and Mendocino counties. The flowering period is May through August.	Serpentine rocks cover most of the project site. However, glandular western flax was not observed during the botanical survey and is not expected to be present.
Green jewel-flower *Streptanthus breweri* var. *hesperidis*	Green jewel-flower occurs in openings in chaprarral and cismontane woodland, or on serpentine or rocky sites. The species is reported between 400 and 2,500 feet in elevation. Populations are known to occur in Glenn, Lake, Napa, and Sonoma counties. The flowering period is May through July.	Review of CNDDB records found that the green jewel-flower has been broadly mapped to include the project site. The exact location of this occurrence is uncertain, but has been mapped to include most of the community of Lakeport. Serpentine rocks cover most of the project site. However, green jewel-flower was not observed during the botanical survey and is not expected to be present or affected by project implementation.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Koch's cord moss *Entosthodon kochii*	Koch's cord moss occurs on moist soils in cismontane woodland. The species is reported between 1,600 and 3,300 feet in elevation. Populations are known to occur in San Luis Obispo, Mariposa, Marin, and Mendocino counties.	The project site lacks cismontane woodland and is slightly below the reported elevation range for Koch's cord moss. Koch's cord moss is not expected to be present or affected by project implementation.
Konocti manzanita *Arctostaphylos manzanita* ssp. *elegans*	Konocti manzanita occurs on volcanic soils in chaparral, cismontane woodland, and lower montane coniferous forest. The species is reported between 1,300 and 4,600 feet in elevation. Populations are known to occur in Colusa, Glenn, Tehama, Lake, Napa, and Sonoma counties. The flowering period is March through May.	The project site is nearly devoid of trees and shrubs, and lacks suitable habitat for Konocti manzanita. Konocti manzanita was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Mayacamas popcorn-flower *Plagiobothrys lithocaryus*	Mayacamas popcorn-flower occurs on moist sites in cismontane woodland, and valley and foothill grasslands. The species is reported between 900 and 1,500 feet in elevation. Populations are known to occur in Mendocino and Lake counties. The flowering period is April through May.	Review of CNDDB records found that the Mayacamas popcorn-flower has been broadly mapped to include the project site. The exact location of this occurrence is uncertain, but has been mapped to include most of the community of Lakeport. The onsite grassland provides marginally suitable habitat for Mayacamas popcorn-flower. The species was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Napa bluecurls *Trichostema ruygtii*	Napa bluecurls occurs in vernal pools in valley and foothill grasslands, and in openings in chaparral, cismontane woodland, and lower montane coniferous forest. The species is reported between 100 and 2,000 feet in elevation. Populations are known to occur in Napa and Solano counties. The flowering period is June through October.	The project site lacks vernal pools, chaparral, and cismontane woodland. Napa bluecurls was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Norris' beard moss *Didymodon norrisii*	Norris' beard moss occurs on rocks in cismontane woodland and lower montane coniferous forest. The species is reported to occur between 2,000 and 6,500 feet in elevation.	The project site is well below the elevational range of Norris' beard moss. The species would thus not be present.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Oval-leaved viburnum *Viburnum ellipticum*	Oval-leaved viburnum inhabits chaparral, cismontane woodland, and lower montane coniferous forests. The species often occurs on north-facing slopes covered by dense brush. Oval-leaved viburnum is found between 700 and 4,600 feet in elevation. The flowering period is May through June.	The project site lacks chaparral, cismontane woodland, and montane coniferous forest. Oval-leaved viburnum was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Raiche's manzanita *Arctostaphylos stanfordiana* ssp. *raichei*	Raiche's manzanita occurs on serpentine soils in chaparral and lower montane coniferous forest. The species is reported between 1,500 and 3,300 feet in elevation. Populations are known to occur in Mendocino County. The flowering period is February through April.	The project site is nearly devoid of trees and shrubs, and lacks suitable habitat for Raiche's manzanita. Raiche's manzanita was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Rincon Ridge ceanothus *Ceanothus confusus*	Rincon Ridge ceanothus occurs on dry, serpentine or volcanic soils in chaparral, cismontane woodland, and lower montane coniferous forests. The species is reported between 250 and 3,500 feet in elevation. Populations are known to occur in Lake, Mendocino, Napa, and Sonoma counties. The flowering period is February through June.	The project site is nearly devoid of trees and shrubs, and lacks suitable habitat for Rincon Ridge ceanothus. Rincon Ridge ceanothus was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Robust monardella *Monardella villosa* ssp. *globosa*	Robust monardella occurs in openings in chaparral and oak woodlands. The species is reported from sea level to 4,300 feet in elevation. Populations are known to occur in Alameda, Contra Costa, Humboldt, Lake, Mendocino, Napa, Santa Clara, Santa Cruz, San Mateo, and Sonoma counties. The flowering period is June through July.	The project site is nearly barren of trees and shrubs. Robust monardella was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Serpentine cryptantha *Cryptantha clevelandii* var. *dissita*	Serpentine cryptantha occurs on serpentine rock outcrops in chaparral. The species is reported between 1,100 and 2,400 feet in elevation. Populations are known to occur in Lake, Mendocino, Napa, and Sonoma counties. The flowering period is April through June.	Serpentine cryptantha was observed on the project site.
Small-flowered calycadenia *Calycadenia micrantha*	Small-flowered calycadenia generally occurs on rocky talus or in sparsely vegetated areas, but is occasionally found on serpentine soils and roadsides. The species is reported from sea level to 5,000 feet in elevation. Populations are known to occur in Monterey, Trinity, Lake, Napa, and Colusa counties. The flowering period is June through September.	The project site has a moderate potential to support small-flowered calycadenia. However, small-flowered calycadenia was not observed during the botanical survey and is not expected to be present or affected by project implementation.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Small groundcone *Boschniakia hookeri*	Small groundcone occurs in North Coast coniferous forests, and is often found in association with salal. The species is reported between 300 and 2,900 feet in elevation. Populations are known to occur in Del Norte, Humboldt, Mendocino, Marin, and Trinity counties. The flowering period is April through August.	The project site is nearly devoid of trees and shrubs, and does not have suitable habitat for small groundcone. Small groundcone was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Sonoma canescent manzanita *Arctostaphylos canescens* ssp. *sonomensis*	Sonoma canescent manzanita generally occurs in openings in chaparral. The species is most often found on dry, rocky ridges and slopes of serpentine origin. In the southern portion of its range, the species is found on volcanic soils. Sonoma canscent manzanita is reported between 650 and 4,900 feet in elevation. Populations are known to occur in Humboldt, Trinity, Mendocino, Lake, Colusa, Tehama, and Sonoma counties. The flowering period is January through June.	The project site is nearly devoid of trees and shrubs, and lacks suitable habitat for Sonoma canescent manzanita. Sonoma canescent manzanita was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Two-carpellate western flax *Hesperolinon bicarpellatum*	Two-carpellate western flax occurs in serpentine barrens at the edge of chaparral. The species is reported between 500 and 2,700 feet in elevation. Populations are known to occur in Lake, Napa, and Sonoma counties. The flowering period is May through July.	Serpentine rocks cover most of the project site. However, two-carpellate western flax was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Woolly meadowfoam *Limnanthes floccosa* ssp. *floccosa*	Woolly meadowfoam generally occurs in vernal pools, ditches, and ponds in valley foothill and grasslands, cismontane woodland, and chaparral. The species is reported between 200 and 3,600 feet in elevation. The flowering period is March through June.	A ditch in the southeast portion of the project site has marginally suitable habitat for woolly meadowfoam. However, woolly meadowfoam was not observed during the botanical survey and is not expected to be present or affected by project implementation.

Appendix F

Checklist of Vascular Plant Species Observed

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Lake County Courthouse Site

April 9 and 29, May 17, and June 19, 2010

Amaranthaceae	**Amaranth Family**
Amaranthus albus	Tumbleweed
Apiaceae	**Carrot Family**
Lomatium macrocarpum	Large-fruited lomatium
Perideridia sp.	Yampah
Torilis arvensis	Field hedge-parsley
Asteraceae	**Sunflower Family**
Achyrachaena mollis	Blow-wives
Agoseris grandiflora	Large-flowered agoseris
Agoseris heterophylla	Annual agoseris
Ancistrocarphus filagineus	Wooly fishhooks/false neststraw
Anthemis cotula	Stinking chamomile
Baccharis pilularis	Coyote-brush
Calycadenia pauciflora	Smallflower western rosinweed
Carduus pycnocephalus	Italian thistle
Centaurea solstitialis	Yellow star thistle
Chamomilla suaveolens	Pineapple weed
Cirsium cymosum	Peregrine thistle
Filago gallica	Narrow-leaved filago
Hemizonia congesta ssp. *clevelandii*	Hayfield tarweed
Hypochaeris glabra	Smooth cat's ear
Lactuca sp.	Prickly lettuce
Lagophylla ramosissima var. *ramosissima*	Common hareleaf
Lasthenia californica	California goldfields
Layia septentrionalis	Colusa tidytips
Micropus californicus var. *californicus*	Slender cottonweed
Microseris douglasii ssp. *douglasii*	Douglas' silverpuffs
Psilocarphus tenellus var. *tenellus*	Slender woolly marbles
Rigiopappus leptocladus	Rigiopappus
Senecio vulgaris	Old-man-in-the-Spring
Sonchus asper ssp. *asper*	Prickly sow thistle
Uropappus lindleyi	Silverpuffs
Boraginaceae	**Borage Family**
Amsinckia lunaris	Bent-flowered fiddleneck
Amsinckia menziesii var. *menziesii*	Menzies' fiddleneck
Cryptantha clevelandii var. *dissita*	Cleveland's cryptantha
Plagiobothrys nothofulvus	Rusty popcorn-flower
Brassicaceae	**Mustard Family**
Athysanus pusillus	Petty athysanus
Brassica rapa	Field-mustard
Capsella bursa-pastoris	Shepherd's purse
Lepidium sp.	Peppergrass
Lepidium nitidum var. *nitidum*	Shining peppergrass
Streptanthus barbiger	Bearded jewelflower
Thysanocarpus curvipes	Lace pod

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Lake County Courthouse Site

Campanulaceae	**Bluebell Family**
Githopsis specularioides	Common bluecup
Caryophyllaceae	**Pink Family**
Cerastium glomeratum	Mouse-eared chickweed
Minuartia douglasii	Douglas' sandwort
Petrorhagia dubia	Grass pink
Scleranthus annuus ssp. *annuus*	German knotgrass
Spergularia rubra	Ruby sand spurry
Convolvulaceae	**Morning Glory Family**
Convolvulus arvensis	Bindweed
Crassulaceae	**Stonecrop Family**
Crassula tillaea	Moss pygmy weed
Cucurbitaceae	**Gourd Family**
Marah sp.	Man-root
Cuscutaceae	**Dodder Family**
Cuscuta californica	Chaparral dodder
Euphorbiaceae	**Spurge Family**
Eremocarpus setigerus	Dove weed
Fabaceae	**Legume Family**
Astragalus gambelianus	Gambel's dwarf milkvetch
Lotus sp.	Lotus
Lotus denticulatus	Riverbar birds-foot trefoil
Lotus humistratus	Hairy lotus
Lotus purshianus	Spanish lotus
Lupinus bicolor	Bicolored lupine
Medicago minima	Hairy bur-clover
Medicago polymorpha	California bur-clover
Medicago praecox	Mediterranean bur-clover
Trifolium albopurpureum var. *dichotomum*	Branched Indian clover
Trifolium bifidum var. *decipiens*	Deceptive clover
Trifolium dubium	Little hop clover
Trifolium hirtum	Rose clover
Trifolium willdenovii	Tomcat clover
Vicia sativa ssp. *nigra*	Garden vetch
Vicia villosa ssp. *villosa*	Winter vetch
Fagaceae	**Oak Family**
Quercus lobata	Valley oak (seedling)
Gentianaceae	**Gentian Family**
Centaurium muehlenbergii	Muhlenberg's centaury

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Lake County Courthouse Site

Geraniaceae	**Geranium Family**
Erodium botrys	Long-beaked filaree
Erodium brachycarpum	Short-fruited storksbill
Erodium cicutarium	Red-stemmed filaree
Hydrophyllaceae	**Waterleaf Family**
Phacelia corymbosa	Serpentine phacelia
Iridaceae	**Iris Family**
Sisyrinchium bellum	Blue-eyed grass
Juncaceae	**Rush Family**
Juncus bufonius	Toad rush
Liliaceae	**Lily Family**
Allium falcifolium	Scytheleaf onion
Brodiaea californica var. *californica*	California brodiaea
Calochortus vestae	Coast Range mariposa lily
Chlorogalum sp.	Soap plant
Dichelostemma capitatum ssp. *capitatum*	Blue dicks
Malvaceae	**Mallow Family**
Sidalcea diploscypha	Fringed checkerbloom
Onagraceae	**Evening-Primrose Family**
Camissonia graciliflora	Hill suncup
Clarkia gracilis ssp. *gracilis*	Slender clarkia
Clarkia gracilis ssp. *tracyi*	Tracy's clarkia
Clarkia purpurea ssp. *quadrivulnera*	Winecup clarkia
Epilobium minutum	Chaparral willowherb
Orobanchaceae	**Broom-rape Family**
Orobanche fasciculata	Clustered broom-rape
Papaveraceae	**Poppy Family**
Eschscholzia californica	California poppy
Platystemon califonicus	Creamcups
Plantaginaceae	**Plantain Family**
Plantago sp.	Plantain
Plantago erecta	Hooker's plantain
Poaceae	**Grass Family**
Aegilops triuncialis	Barbed goatgrass
Aira caryophyllea	Silver hairgrass
Avena barbata	Slender wild oats
Avena fatua	Wild oats
Bromus carinatus var. *carinatus*	California brome
Bromus diandrus	Ripgut grass
Bromus hordeaceus	Soft chess
Bromus madritensis ssp. *rubens*	Red brome
Deschampsia danthonioides	Annual hairgrass

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Lake County Courthouse Site

Elymus multisetus	Big squirreltail
Hordeum brachyantherum ssp. *californicum*	California barley
Hordeum marinum ssp. *gussoneanum*	Mediterranean barley
Hordeum murinum	Foxtail barley
Lolium multiflorum	Annual ryegrass
Melica californica	California melic
Nasella pulchra	Purple needlegrass
Poa annua	Annual bluegrass
Poa secunda ssp. *secunda*	One-sided bluegrass
Scribneria bolanderi	Scribner grass
Secale cereale	Rye
Taeniatherum caput-medusae	Medusa head
Vulpia microstachys var. *ciliata*	Fringed fescue
Vulpia microstachys var. *microstachys*	Small fescue
Vulpia microstachys var. *pauciflora*	Few-flowered fescue
Vulpia myuros var. *myuros*	Rattail fescue
Polemoniaceae	**Phlox Family**
Gilia capitata ssp. *capita*	Globe gilia
Gilia tricolor	Bird's eyes
Leptosiphon bolanderi	Bolander's linanthus
Linanthus bicolor	Bicolored linanthus
Polygonaceae	**Buckwheat Family**
Eriogonum nudum	Naked buckwheat
Eriogonum vimineum	Wicker buckwheat
Rumex crispus	Curly dock
Portulacaceae	**Purslane Family**
Calandrinia ciliata	Red maids
Claytonia exigua ssp. *exigua*	Little miner's-lettuce
Claytonia perfoliata	Common miner's lettuce
Primulaceae	**Primrose Family**
Anagallis arvensis	Scarlet pimpernel
Pteridaceae	**Brake Family**
Pentagramma triangularis ssp. *triangularis*	Goldback fern
Ranunculaceae	**Buttercup Family**
Delphinium hansenii ssp. *hansenii*	Eldorado larkspur
Ranunculus sp.	Buttercup
Rosaceae	**Rose Family**
Crataegus sp.	Hawthorn (horticultural)
Rubiaceae	**Madder Family**
Galium aparine	Cleavers
Galium parisiense	Wall bedstraw

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Lake County Courthouse Site

Scrophulariaceae	**Snapdragon Family**
Castilleja attenuata	Valley tassels
Castilleja exserta ssp. *exserta*	Exserted Indian paintbrush
Castilleja rubicundala ssp. *lithospermoides*	Cream sacs
Collinsia sparsiflora var. *sparsiflora*	Spinster's blue eyed Mary
Mimulus guttatus	Common monkey-flower
Triphysaria eriantha	Johnny tuck
Verbascum blattaria	Moth mullein
Taxodiaceae	**Bald Cypress Family**
Sequoia sempervirens	Redwood (horticultural)
Valerianaceae	**Valerian Family**
Plectritis macrocera	White plectritis

Appendix G

Checklist of Wildlife Species Observed

Checklist of Wildlife Species Observed
Lake County Courthouse
675 Lakeport Boulevard, Lakeport, CA

Common Name	Scientific Name	Status
BIRDS		
American crow	*Corvus brachyrhynchos*	None
Black-tailed jackrabbit	*Lepus californicus*	None
California gull	*Larus californicus*	None
Common raven	*Corvus corax*	None
Killdeer	*Charadrius vociferus*	None
Red-tailed hawk	*Buteo jamaicensis*	None
Western scrub-jay	*Aphelocoma californica*	None
MAMMALS		
California ground squirrel	*Otospermophilus beecheyi*	None
Gopher	*Thomomys* sp.	None
REPTILES		
Western fence lizard	*Sceloperus occidentalis*	None

Pre-jurisdictional Delineation Report

Lake County Courthouse Site
675 Lakeport Boulevard
Lake County, California

Prepared for:

Adminstrative Office of the Courts

July 16, 2010

500-01

ENPLAN

Lake County Courthouse Site
Pre-jurisdictional Delineation Report

Applicant/Land Owner:
Administrative Office of the Courts
2860 Gateway Oaks Drive, Suite 400
Sacramento, CA 95833
Attention: Laura Sainz

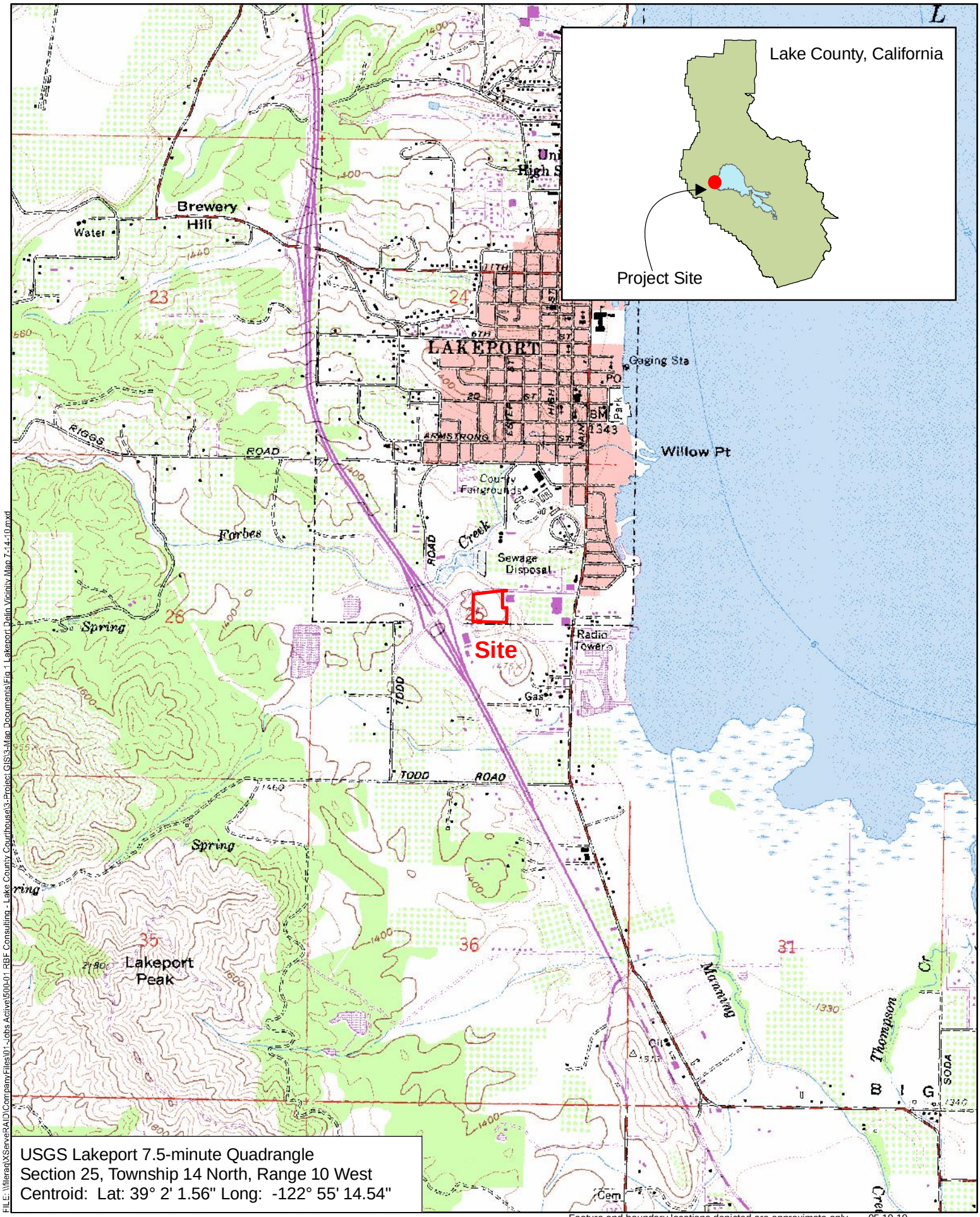
Access:
From Lakeport, take Highway 29 to the Lakeport Boulevard exit. Travel east on Lakeport Boulevard approximately 1000 feet. The site is on the south side of Lakeport Boulevard and can be accessed from the road margin.

I. INTRODUCTION

The ±6.4-acre study site is located east of the intersection of Lakeport Boulevard and Highway 29 in the City of Lakeport, Lake County. The study site encompasses the subject ±5.8-acre parcel as well as the southern fill slope along Lakeport Boulevard to the north. As shown in Figure 1, the site is situated near the center of Section 25, Township 14 North, Range 10 West (Lakeport, CA, 7.5-minute quadrangle). The site is identified as Lake County Assessor's Parcel Number 025-521-410 and is being evaluated for potential construction of a new Lake County courthouse.

The site elevation ranges between 1,340 and 1,400 feet above sea level. The site was historically an oak woodland, and was used for agriculture and grazing beginning in the late 1930s; the site was cleared of trees and shrubs in the early 1970s, and was graded prior to 1988 (URS, 2009). Grading dramatically altered the natural contours of the site. Roughly 20 feet of surface material was removed from the upper portion of the site, resulting in two level terraces.

Small rocks of serpentine origin are exposed on the upper terrace and hillsides, which support a serpentine herb community. The serpentine herb community generally consists of a sparse, low-growing cover of annual and perennial forbs and grasses including naked buckwheat, wicker buckwheat, reflexed fescue, serpentine phacelia, fringed checkerbloom, bearded jewelflower, Douglas's sandwort, and Gambel's dwarf milkvetch. The lower terrace, on the eastern edge of the study area, supports an annual grassland community. Common species in this community include wild oats, soft chess, California meadow barley, cream sacs, winter vetch, Spanish lotus, and various clovers. All of the above species have an indicator status of FACU or drier.



USGS Lakeport 7.5-minute Quadrangle
Section 25, Township 14 North, Range 10 West
Centroid: Lat: 39° 2' 1.56" Long: -122° 55' 14.54"

FILE: \\fileraid\XServeRAID\CompanyFiles\01-Jobs Active\500-01 RBF Consulting - Lake County Courthouse\3-Project GIS\3-Map Documents\Fig 1 Lakeport Delin Vicinity Map 7-14-10.mxd

Feature and boundary locations depicted are approximate only. 05.19.10

0 2,000 Feet

Figure 1

Project Vicinity Map

ENPLAN

According to the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS, 2010), two soil units are present on the study site. Henneke-Montara-rock outcrop complex, 15-30 percent slopes, covers nearly the entirety of the study site. A very small amount of Still loam, stratified substratum, is mapped as occurring in the extreme northeast corner of the site. The Henneke-Montara-rock outcrop complex is not considered hydric, while the Still soil unit is partly hydric, i.e., it may contain inclusions of hydric soils. It should be noted that past grading activities on the site have resulted in removal and/or redistribution of most of the on-site soils.

The climate of the project vicinity is of the Mediterranean type, with cool, moist winters and hot, dry summers. Annual precipitation averages ±28.4 inches in the community of Lakeport, which reasonably approximates conditions on the subject site (Western Regional Climate Center, 2010).

II. METHODOLOGY

Prior to undertaking the field studies, National Wetlands Inventory maps (U.S. Fish and Wildlife Service, n.d.) were reviewed to determine if any jurisdictional waters had been previously reported on or within one-half mile of the project site. Such data is not available for the Lakeport quadrangle.

The primary field investigation was conducted on April 29 and 30, 2010. During the field investigation, field conditions were relatively wet. Average April rainfall for the City of Lakeport measures 2.19 inches; actual rainfall totals for April 2010 measured 6.89 inches (NOAA, 2010).

The wetland investigation was conducted in accordance with technical methods outlined in the Corps of Engineers Wetlands Delineation Manual (U.S. Department of the Army, Corps of Engineers, 1987) and under the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (U.S. Department of the Army, Corps of Engineers, 2008), which is referred to as the "Arid West Supplement" in this report. Wetland Determination Data Forms are presented in Appendix A of this report.

Although no wetlands were identified, several non-wetland waters of the United States are present. The limit of the Corps of Engineers' jurisdiction over these features is represented by the ordinary high water mark. As described in the Code of Federal Regulations Title 33: Navigation and Navigable Waters-Sec. 328.3(e), the ordinary high water mark is defined as the line on the shore established by fluctuations of water indicated by physical characteristics. These may include a clear/natural line on the bank, shelving, changes in soil, destruction of terrestrial vegetation, presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. The limits of on-site ditches and seasonal waters were identified in the field using these indicators.

Scientific nomenclature for plants cited in this report is in accordance with the taxonomic treatments presented in *A Synonymized Checklist of the Vascular Flora of the United States, Canada, and Greenland* (Kartesz, 1994). The wetland indicator status of the plants was determined using the *National List of Plant Species That Occur in Wetlands: California (Region 0)* (U.S. Department of the Interior, Fish and Wildlife Service, 1988). Soil colors were identified using *Munsell Soil Color Charts* (Kollmorgen Instruments Corporation, 2000).

Coordinates along the perimeters of non-linear waters were obtained using a global positioning system (GPS) unit capable of sub-meter accuracy. Coordinates for the centerlines of ditches were also recorded with the GPS unit; the aerial extent of the ditches was calculated based on cross-sectional measurements taken at roughly 25-foot intervals. The GPS coordinates were downloaded into ArcMap for mapping and acreage calculations.

III. RESULTS

During the field investigation, ENPLAN mapped eight non-wetland waters of the United States within two categories: seasonal waters and constructed ditches. These features are characterized below. The results of the field delineation effort are summarized in Tables 1 and 2 and shown in Figure 2. Representative photos are presented in Appendix B.

Seasonal Waters: Two seasonal waters, on the western edge of the upper terrace, were created when the site was graded and bedrock was exposed. Water now ponds to a depth of two to three inches in these shallow depressions underlain by bedrock. Representative plant species include scribner grass (*Scribneria bolanderi*, UPL), annual hairgrass (*Deschampsia danthonioides*, FACW), and rigiopappus (*Rigiopappus leptocladus*, UPL), but vegetative cover is less than five percent. As described in the Arid West Supplement, features with an ordinary high water mark and less than five percent vegetative cover are non-wetland waters. The extent of ponding was documented through site inspections on February 8 and April 9, 29 and 30, 2010, as well as by the presence of water-stained rock, sediment deposits, and a biotic crust.

Constructed Ditches: Constructed ditches are excavated features that may be located in either wetlands or uplands, and may convey water collected from sheet flow or diverted from other water bodies. The jurisdictional status of constructed ditches depends in part on these characteristics. The on-site ditches are constructed in uplands, and receive sheet-flow runoff and discharge from the two non-wetland waters on the upper terrace. Most of the ditches have only ephemeral flow. However, 3:CD and 8:CD do not drain well and support wetland plant species in their lower ends; species present include annual ryegrass (*Lolium multiflorum = L. perenne*, FAC*), *Hordeum marinum* ssp. *gussoneanum = H. hystrix*, FAC), and common monkey-flower (*Mimulus guttatus*, OBL).

Table 1
Summary of Waters by Type

Type	Area	
	sq. ft.	acres
Constructed Ditches	2,108	0.048
Seasonal Waters	3,793	0.087
Total Waters	**5,901**	**0.135**

Table 2
Waters by Map ID

Map ID	Type	Average Width	Length	Area	
				sq. ft.	acres
1	Constructed Ditch	1.7	350	595	0.014
2	Constructed Ditch	0.5	20	10	0.000
3	Constructed Ditch	4.6	206	948	0.022
4	Seasonal Water	–	–	2,599	0.060
5	Seasonal Water	–	–	1,194	0.027
6	Constructed Ditch	1.6	178	285	0.007
7	Constructed Ditch	1.5	10	15	0.000
8	Constructed Ditch	2.3	111	255	0.006
			Total Waters	**5,901**	**0.135**

Figure 2	
Potential Waters of the U.S. and/or State	
Project:	Lake County Courthouse Site
Delineator:	Don Burk
Date:	February 8 & April 9, 29, & 30, 2010
Date Revised:	

Potential Waters by Map ID					
Map ID	Type	Average Width (feet)	Length (feet)	Area	
				sq. ft.	acres
1:CD	Constructed Ditch	1.7	350	595	0.014
2:CD	Constructed Ditch	0.5	20	10	0.000
3:CD	Constructed Ditch	4.6	206	948	0.022
4:RW	Seasonal Water	–	–	2,599	0.060
5:RW	Seasonal Water	–	–	1,194	0.027
6:CD	Constructed Ditch	1.6	178	285	0.007
7:CD	Constructed Ditch	1.5	10	15	0.000
8:CD	Constructed Ditch	2.3	111	255	0.006
			Total Waters	5,901	0.135

Feature and boundary locations depicted are approximate only. 07.16.10

0 100 Feet

ENPLAN

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IV. JURISDICTIONAL DETERMINATION

As described in Regulatory Guidance Letter 08-02, the applicant concurs with the Army Corps of Engineers that waters regulated under the Clean Water Act may be present on the site. As such, these waters will be treated as jurisdictional for the purpose of calculating fill and satisfying future mitigation requirements. The applicant understands that they can later request and obtain an approved JD if that later becomes necessary or appropriate during the permit process or during the administrative appeal process.

V. REFERENCES

Kartesz, J.T. 1994. *A Synonymized Checklist of the Vascular Flora of the United States, Canada, and Greenland*. 2nd edition. Volume 1 — Checklist, Volume 2 — Thesaurus. Timber Press, Inc., Portland, Oregon.

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APPENDIX A

Wetland Determination Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lake County Courthouse Site City/County: Lake County Sampling Date: 4-30-10

Applicant/Owner: Administrative Office of the Courts State: CA Sampling Point: DP1

Investigator(s): Don Burk Section, Township, Range: Section 25, Township 14 North, Range 10 West

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR): C Lat: 39º 2' 3.89" Long: 122º 55' 12.06" Datum: NAD83

Soil Map Unit Name: Henneke-Montara-Rock Outcrop Complex, 15-30 percent slopes NWI classification: N.A.

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? No Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks: Although wetland characteristics are evident, the sample site is at the lower end of a constructed drainage ditch, and is best defined as a non-wetland water of the United States.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Lolium multiflorum ssp. perenne	30	Yes	FAC*
2. Hordeum marinum ssp. gussoneaum (=H. hystrix)	60	Yes	FAC
3. Vulpia microstachys var. pauciflora	8	No	NL
4. Achyrachaena mollis	2	No	FAC
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: DP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-2	7.5YR 2.5/2	100					loam	
2-4	5YR 3/1	100						
4-14	7.5YR 3/2	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- X Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lake County Courthouse Site City/County: Lake County Sampling Date: 4-30-10

Applicant/Owner: Administrative Office of the Courts State: CA Sampling Point: DP1

Investigator(s): Don Burk Section, Township, Range: Section 25, Township 14 North, Range 10 West

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR): C Lat: 39º 2' 3.89" Long: 122º 55' 12.06" Datum: NAD83

Soil Map Unit Name: Henneke-Montara-Rock Outcrop Complex, 15-30 percent slopes NWI classification: N.A.

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? No Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks: Although wetland characteristics are evident, the sample site is at the lower end of a constructed drainage ditch, and is best defined as a non-wetland water of the United States.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Lolium multiflorum ssp. perenne	30	Yes	FAC*
2. Hordeum marinum ssp. gussoneaum (=H. hystrix)	60	Yes	FAC
3. Vulpia microstachys var. pauciflora	8	No	NL
4. Achyrachaena mollis	2	No	FAC
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: DP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-2	7.5YR 2.5/2	100					loam	
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4-14	7.5YR 3/2	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
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- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
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- ___ Presence of Reduced Iron (C4)
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- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lake County Courthouse Site City/County: Lake County Sampling Date: 4-30-10

Applicant/Owner: Administrative Office of the Courts State: CA Sampling Point: DP1

Investigator(s): Don Burk Section, Township, Range: Section 25, Township 14 North, Range 10 West

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Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? No Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

Although wetland characteristics are evident, the sample site is at the lower end of a constructed drainage ditch, and is best defined as a non-wetland water of the United States.

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2.			
3.			
4.			
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Sapling/Shrub Stratum			
1.			
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4.			
5.			
Total Cover:			
Herb Stratum			
1. Lolium multiflorum ssp. perenne	30	Yes	FAC*
2. Hordeum marinum ssp. gussoneaum (=H. hystrix)	60	Yes	FAC
3. Vulpia microstachys var. pauciflora	8	No	NL
4. Achyrachaena mollis	2	No	FAC
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: DP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-2	7.5YR 2.5/2	100					loam	
2-4	5YR 3/1	100						
4-14	7.5YR 3/2	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- X Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

APPENDIX B

Representative Photos

Representative Photos of On-site Waters

4:SW looking southeast 2/8/10

5:SW looking southeast 2/8/10

Biotic crust in 5:SW 4/29/10

1:CD looking west 4/29/10

Lower terminus of 1:CD and 2:CD, with discharge to uplands 4/29/10

3:CD looking north 4/29/10

6:CD (foreground) looking northeast 4/29/10

8:CD looking west toward culvert 3/17/10

Storm drain inlet at terminus of 8:CD 4/29/10

Non-jurisdictional drainage near 7:CD with no evidence of OHWM 4/29/10